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CONCEPTS AND STRUCTURE IN THE NEW SOCIAL SCIENCE CURRICULA

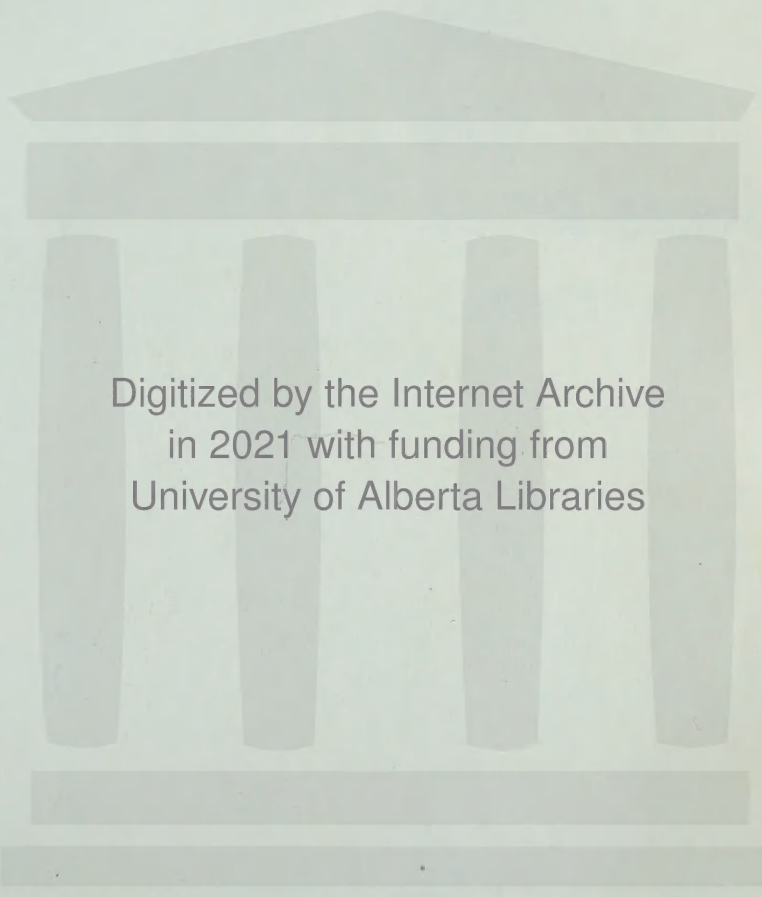
IRVING MORRISSETT, EDITOR

Conference sponsored by the Social Science Education Consortium

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THE
NEW
SOCIAL SCIENCE
CURRICULA

CONCEPTS
AND
STRUCTURE IN THE
NEW
SOCIAL SCIENCE
CURRICULA

Based on a Conference at Purdue University,
January 29-30, 1966, Sponsored by the Social Science
Education Consortium

Irving Morrisett, Editor

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CURRICULA

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FOREWORD

The conference on which this book is based was supported by a developmental contract of the United States Office of Education, made with Purdue University for the Social Science Education Consortium under the provisions of the Cooperative Research Program, and by a grant made by the Charles F. Kettering Foundation to the Social Science Education Consortium, Inc.

FOREWORD

This book presents an excellent example of how two of the major purposes of the Social Science Education Consortium can be carried out. One of these purposes is the stimulation of an active dialogue among social scientists, with the purpose of supporting and guiding education in a search for the most appropriate learning materials and learning designs to offer teachers and students—materials and designs that will make the current and developing resources of the social sciences available for the construction of elementary and secondary curricula.

The second purpose furthered by the book is the development of mutual understanding and collaboration between the scientists and the educational specialists, to provide a bridge between the frontiers of social science knowledge and the learning experiences of pupils.

We believe that the book makes substantial progress in these two areas, and also illustrates and clarifies a number of additional potentialities and problems of social science education. For example, the necessity of coping with issues and methods related to values in education is revealed and fruitfully explored, and the usefulness of involving philosophers of science in the dialogue becomes apparent. Also, problems of the relationship of the other social sciences to history and geography are confronted openly and productively.

The Consortium sees the encouragement of this type of reflective inquiry as a top priority, supplementing its general concern for better liaison among curriculum development projects, for dissemination of information about curriculum resources, for exploring the issues in teacher education, and for promoting sound procedures for curriculum evaluation. We express our deep appreciation to all those who moved us a firm step forward through their thoughtful participation in the conference on which this book was based.

Ann Arbor, Michigan

October 1967

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PREFACE

Most of the new social science curriculum projects have begun their work with an intensive and sometimes prolonged study of the subject matter to be included in the curriculum. A number of outstanding scholars in the various social sciences have participated in these inquiries. Thus far, little information has been made available—to other projects or to schools and teachers—about the outcome of these studies. Further, there is no assurance that there will be any general dissemination of the results of these labors, other than in an implicit form when the final materials are published.

The Social Science Education Consortium has felt for some time that there could be great value in an early exchange of ideas among project workers about approaches taken to social science content in the new curricula. Such an exchange was the task proposed for the conference on which this book is based, in the hope that it would contribute to the improvement of the large and growing amount of academically-based curriculum work, by cross-fertilization of disciplines and projects, and by sharpening both hindsight and foresight on the best approaches to curriculum content.

Responses to invitations to the conference were enthusiastic, and reactions of participants after the conference, both verbal and written, were still more enthusiastic. I think these responses can be attributed largely to the great need that is felt for confrontations of the kind that were possible at the conference—among curriculum project people, social scientists, university educators, teachers, curriculum directors, and school administrators. I hope this record of the meeting has captured, in readable form, the expositions and the confrontations that made the conference rich and memorable for those who attended it.

The presentations made at the conference were subjected to some revisions, mostly stylistic, by the editor and the authors. Chapter 1 was not given as a speech at the conference; it represents my own view of the conference theme, put together from thinking during the planning stages of the conference, preliminary notes to conference participants, introductory remarks at the conference, and reflections following the conference.

Providing a record of the conference discussions posed the greatest problem for the editor. The decision to present it in dialogue form

was influenced primarily by a reluctance to bury colorful phrases and clashing opinions in indirect discourse. The price of this color is paid in occasional discontinuities that shoot off like tracks in a cloud chamber. But as conference chairman, the editor was able to exercise some *ad hoc* control over the discussion, and, as editor of this book, he could add *post hoc* control — mostly to reduce the volume of words and, to a lesser extent, rearrange content.

The Structure of the Book

The planning of the book is best indicated by topics of the authors: a major emphasis on cognitive content and its structuring (Chapters 2, 3, 5, 6, 10 and 11); an important secondary emphasis on values as content in the curriculum (Chapters 13 and 14); and tertiary emphasis on the processes of learning (Chapter 8). The importance of conference participants other than the speaker-authors — curriculum project people, classroom teachers, principals, social scientists, university educators, and philosophers — is indicated by the space allotted to dialogues distilled from the conference (the “Round Table” chapters — 4, 7, 9, 12, and 15.)

My work in editing this book has left me with a profound respect for the contributions made by speakers and other participants in two days of open and soul-searching communication. Participants were not unwilling to stay with the topic — the content of social science curricula — but they also insisted on recognition of the relationship of content to the whole educational enterprise of which it is only one part. The overall result was, to my mind, close to ideal: a concentration on the particular part of education designated as the conference theme, with enough reminders of important related matters to keep our feet on the ground.

Content, Processes and Values

The most persistent theme of the conference discussions was the relationship between substantive content, learning processes, and values. This matter was the main topic in the first discussion (Chapter 4), and recurred later in various forms. The sharpest conflict was over the relationship between content and processes. Differences appeared, not over whether there should be content or process, but over the relationship between them and the emphasis on each. Several arguments were given for emphasizing process rather than content. One was that formal education can never

cover all the educational needs that may arise in the future of a particular individual; therefore, it is necessary for students to learn how to learn, so that they may meet their own educational needs as they arise after formal schooling is completed. Another argument, stated by a developmental psychologist, was that the division of knowledge into subject areas is arbitrary, and subject to change; therefore, it is more valuable for children to learn how to learn than it is to learn particular content that is tied to particular disciplines whose boundaries may be quite different in the future (Sigel, pp. 42-3). A third argument for stressing the processes of learning rather than content was that the content of knowledge is changing so rapidly—an estimate of a “half-life” of fifteen years for today’s knowledge was mentioned—that the waste of obsolescence can be avoided only by a stress on learning how to learn (Hering, 41; Senesh, 40; Taba, 39; McNee, 69).

The discussion of processes included several related ideas—discovery, inductive learning, inquiry, and problem solving, which receives the most explicit discussion. Despite widespread approval for processes of this kind in preference to the more familiar didactic methods, questions were raised. An educator said that much of the devotion to process is lip-service, not backed up in curriculum designs (Shaver, 41-2). Others pointed out that “problem solving” is in need of better definition (Berlak, 69; Taba, 69), and that, in any case, it has not been shown that problem-solving ability is something that carries over from one subject to another (Berlak, 69). *Inquiry* as a process was also examined. The suggestion that inquiry may be a gimmick to get the children to plan what teachers have already decided they should do (Marker, 112-3) was answered with the declaration that some inquiry problems are genuinely open-ended (Featherstone, 113), although there must be a certain amount of prescreening and structuring of experiences (Lerner, 113; Plessner, 114).

Long before the planned presentations of value issues, questions about values in the curriculum arose. Participants were reluctant to discuss the substantive content and the processes of social science education without including values (Fenton, 44; Berlak, 44), and various complex relationships within the triangle of content-processes-values were noted. For example, there are important questions about methods or processes of dealing with values, just as there are questions about processes of dealing with substantive content (Berlak, 44). Value may be attached to analytical processes, such as valuing results derived from inquiry over those derived

from authority (Fenton, 67); and values may be influenced by the content that is selected for study (Fenton, 44, 46; Hering, 45).

Value issues arose throughout the conference, and took the center of the stage in the final discussion session. It would serve no purpose to try to summarize the spirited discussions here, but the major issues can be pointed up.

One issue was the role of rationality in values. In one of the most intriguing exchanges of the conference, the view that most, and perhaps all, value issues can be resolved on rational grounds (Scriven, Chapter 14 and pp. 142-6) was sharply contested (Feigl, Chapter 2 and pp. 147-8; Shaver, 117, 120).

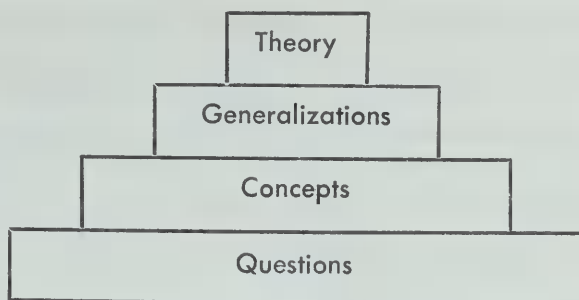
There did not seem to be much question that values should be related in some way to the social studies, but there were differences as to whether teaching about values is usually associated with the social studies as a matter of convenience (McNee, 138-9; Shaver, 139-40) or because it is an integral part of the social sciences (Scriven, 140).

The question of "indoctrination" also arose naturally in the discussion of values. There seemed to be little question that some form of inculcation of values and attitudes belongs somewhere in our educational system. Whether the inculcation should be accomplished mainly through rational processes in the context of particular social studies problems (Senesh, 72-3), through learning experiences particularly planned for training in values (Scriven, 128-30, 131-2; Taba, 133; Shaver, 134-5), or in various contexts not particularly related to social studies (Feigl, 140) was not settled.

There was also some discussion of what types of values it is permissible to teach. According to one view, teaching proper classroom behavior and proper attitudes about inquiry are permissible objectives of inculcation, but teaching substantive values, e.g. democracy is better than communism, is not (Fenton, 67).

Content

Around the central theme of the conference, many controversies swirled, related to the components of social science content. What is the relationship of history and geography to the (other?) social sciences—as a matter of human knowledge and in the construction of curriculum patterns? It appeared that the philosopher's invitation to history to join the science club (Feigl, 19-20) was implicitly but firmly rejected. Taking a little freedom with the philosopher's schema (Feigl, 20), one can describe his hierarchy as follows.



This is a hierarchy in which one goes *up* from questions, through concepts and generalizations, to the capstone of theory. The historian ignored theory entirely (Fenton, Chapter 5), denigrated generalizations (52), found a little utility in concepts (52-3), and settled on questions as “the heart of history” (53-4). He was determined to *descend* the philosopher’s ladder!

I have distorted the picture to make my point. Professor Feigl did not put “questions” at the bottom of his hierarchy, and I am sure he would stress the importance of good questions in scientific inquiry. Professor Fenton talked about *analytical* questions, and stressed the importance of discovering and using the right questions. But he also said that “each historian has his own list” of questions. Where, then, can one hope to find some convergence in the thinking and findings of historians? Scientists seek convergence in verified theories; what is the common ground sought by historians? It did look very much as though history was declining philosophy’s invitation to join the sciences.

Regarding its relationship to science, geography’s position was a little more equivocal than that of history. The mention of earth science, location theory, cultural geography, and political geography (McNee, 61) indicate a willingness to flirt with the sciences, both natural and social. But the emphasis on key questions (57) and research traditions (58), and the establishment of criteria for membership in the geographers’ “tribe” on the basis of shared methods and values, shows a reluctance to consummate the flirtation.

The Place of the Social Sciences

On the question of where the social sciences fit into the total curriculum, as reported in the conference, both anthropology (Hanvey, 95-6) and sociology (Hering, 65-6) have a strategy of infiltration in established courses, and a number of other projects are known to have a similar strategy, with United States history, world

history, civics, government, and problems of democracy as the main guerilla targets. Economics at the elementary level, "orchestrated" with other social sciences in the "organic curriculum," is aimed at replacement of existing social studies curricula (Senesh, Chapter 3 and pp. 41, 67-8). Questions were raised, not in the defense of the displaced subjects, but about crowding the curriculum with new and perhaps more demanding subject matter (Hering, 66; Senn, 87).

In a defense of "social studies" against the intrusion of the social sciences, the question was also raised as to whether the structure of the social sciences should play any independent role in the social studies, or only serve as a source of whatever content the general educator wishes to use (Shaver, 122-4). A social scientist who was among the strongest advocates of using the structure of the disciplines did not feel that the structure must be presented to the children, particularly in the elementary grades. He argued for a structure as an essential element in the training of teachers, to give them a firm foundation for using curriculum materials based on the disciplines. He stated that as children move into the secondary grades, more and more structure of the disciplines can be introduced explicitly (Senesh, 46). Some strong approval for this approach was expressed (Fiegl, 48-9).

Other Problems

The nature and utility of behavioral objectives were discussed. Behavioral objectives were viewed as useful aids in establishing and testing goals of learning in the realms of values, learning skills, and substantive content (Fenton, 65); and there was a reminder of the history of thought about behavioral objectives (Taba, 66). But some confusion crept in when behavioral objectives seemed to be put in a position of conflict with content objectives (Sigel, 65; Taba, 66) and with inquiry processes (Stake, 71). It appears that the confusion arose out of two meanings attributed to the term "behavioral objectives." On the one hand, it may indicate the kinds of behavior that a learner must exhibit in order to show that he has learned what he was supposed to learn. The learning that is specified and tested may be of content, process, or values. Used in this way, behavioral objectives refers to a way of specifying whether learning has taken place; it does not refer to the substance of what is to be learned (although the process of specifying behavioral objectives in this sense may have some beneficial side

effects in the form of clarifying the substance and improving the teaching methods).

On the other hand, behavioral objectives may refer to certain parts of the subject to be learned, particularly to the learning of behavior related to values and processes, in contrast to knowledge about values and processes. The ambiguity could be avoided by using the terms "objectives stated in terms of behavior that will demonstrate the learner's accomplishment of the objectives" for the first meaning, and "objectives related to changing the behavior of the learner" for the second. An alternative to such clumsy phraseology would be some agreed-upon shorthand expressions, such as *behaviorally-stated objectives* and *behavior objectives*, respectively.

The importance of evaluation was recognized and discussed briefly (Senn, 114; Plessner, 114; Featherstone, 114), and the inadequacy of our knowledge recognized (Sigel, 114); but the matter was left mainly for future consideration (Senesh, 150). Strong pleas were made for better and fuller rationales for particular curriculum materials (Fenton, 73; Berlak, 88-9; Lerner, 93-4) as guides to evaluation and as aids to schools and teachers who must establish priorities and choose materials.

The lack of communication between professional educators and content specialists was noted with regret, and with the hope that conferences such as this one would help to bridge the gap (Taba, 90; Senesh, 68, 151).

The great need for teacher training programs to parallel the development of new curricula was noted (Fenton, 73; Hering, 75), bringing forth much information about how some of the needs of teacher training are being met and, incidentally, giving thumbnail sketches of a number of the important curriculum projects not otherwise reported at the meeting. Useful information about teacher training was reported from the Lincoln Filene Center at Tufts University (Gibson, 74), the Educational Research Council of Greater Cleveland (English, 75), the Developmental Economic Education Project of the Joint Council on Economic Education (Symmes, 76), and from activities of school systems in Salt Lake City (Shaver, 76), New York City (Arbital, 76-7), and Dade County (Miami), Florida (Silverman, 77).

One of the most useful aspects of the conference was the confrontation between the curriculum project people and the teachers. "Don't underestimate the classroom teacher," the conference was told, in effect. "Give her credit for intelligence and give her elbow room." (Miller, 92-3; Morley, 66.) "The experts don't own the educational enterprise," warned an educator, "they work for it."

(Searle, 93.) But the conference was also reminded that many teachers are less able and need more help than the kind of teachers who have the initiative and opportunities that enable them to attend a conference of this sort (Lerner, 93-4).

The need to take account of the requirements and capabilities of the child was considered at some length in one of the presentations (Sigel, Chapter 8), and a spirited disagreement developed later over the question of whether the needs of the child are being met in the development and implementation of the new curricula (Taba, 90; Saylor, 91-2; Fenton, 91; Payette, 91-2).

There were a number of expressions during the conference of the value of Consortium activities like the one reported here. Such activities are instrumental in establishing better communication among relevant groups that communicate too infrequently (Taba, 47-8) and in improving coordination among different parts of the process of curriculum development and implementation (Fenton, 73). Several important topics on which the Consortium might focus in future conferences were suggested, including teaching training, evaluation, dissemination, and inductive processes.

Acknowledgments

I am grateful to several conference participants for their assistance in editing various parts of the proceedings; to all of the speakers and other participants for their prompt help in clarifying, approving and occasionally elaborating the remarks attributed to them by the tape recorder; and to Professor Terry Denny of Purdue University for a thoughtful reading of the entire manuscript, which eliminated many errors of both substance and style.

October 1967

Irving Morrisett

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THE
NEW
SOCIAL SCIENCE
CURRICULA

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The New Social Science Curricula

CHAPTER 1

Concepts

A concept is an abstraction—an idea generalized from particular cases. Abraham Kaplan has described a concept as “a prescription for organizing the materials of experience so as to be able to go about our business. . . . What makes a concept significant is that the classification it institutes is one into which things fall, as it were, of themselves. It carves at the joints, Plato said.”¹ A useful concept should identify a cluster of properties that usually go together and that have a meaningful relationship to each other. An example of a concept that is not very useful is “epilepsy,” a term that groups a number of particular instances that have only the superficial symptom of seizures in common, and that differ in their more significant characteristics. This example suggests that concepts may serve purposes beyond that of mere description. We want a definition that “carves at the joint,” for example, so that the dinner host, employing the concept of “thigh” to guide his attack on the roast chicken, will avoid chopping at the mid-point of the femur.

Concepts are commonly used in constructing curricula. When the objectives of a curriculum or a unit are stated, the understanding of certain ideas, or concepts, is usually included. The listing is selective: “Key” ideas or concepts are chosen. The objectives may include, for example, an understanding of “measurement,” “society,” “fairness,” “subtraction,” or “economic system.” Whether the concepts are useful depends on something beyond their customary acceptance and their teachability; it depends on their relationship to a larger body of knowledge.

Concepts are the basis for any scheme of classification. Classification, or taxonomy, is a prominent part of every curriculum, particularly in the early grades. It is important for teachers and children to understand the role that concepts and classifications play in learning. Concepts and classifications are the building blocks of knowledge. "Every taxonomy," Kaplan wrote, "is a provisional and implicit theory."²

Structure

Structure is the arrangement and interrelationship of parts within a whole. A structure can refer to the relationship of concepts to each other; for example, the concepts "economic system" and "political system" may be related to each other in a structure called a "social system." Conversely, a concept may itself have a structure. The concept "economic system" can also be thought of as a structure, having component concepts such as "money" and "spending" which are structurally related to each other.

A typical social studies unit has a list of objectives to be achieved, or understandings to be learned. I have frequently applied to these lists what I call "the shuffle test for structure." The test is applied by shuffling the individual items in the list and then making a judgment about whether anything was lost in the process. If there is no noticeable difference in the usefulness of the list after the shuffling, the test indicates that the original list was without structure. Whether a lack of structure in the list of objectives means that there is a corresponding lack of structure in the materials themselves can be debated; it can also be investigated. I suspect that failure to pass the shuffle test frequently indicates that the accompanying curriculum materials contain isolated, unstructured pieces of content.

The ordering of units within a social studies course may also fail to pass the shuffle test, though perhaps less frequently than is the case with the objectives of a unit. If units are ordered chronologically, as in many history courses, the structure will be lost in the shuffle test; but it is an open question whether chronological ordering provides a useful structure. Units may also be ordered according to the spiral theory, one version of which says that children learn best if they start with content closest to themselves and move outward into the wide world.

What is new in "the new social studies curricula" is increasing emphasis on a new kind of structure that is different from **chro-**

nology and from the spiral theory. The new structure is the scientific structure of the social science disciplines.

Theory

A theory is a general statement about relationships among facts. The facts that are a part of a theoretical statement are not isolated facts, but idealized facts; they have been organized into concepts. A theory is a structure of concepts; it states a relationship—often a causal relationship—among the concepts. A theory is something more than a structure; it is an explanation of how a structure works.

It was a great insight of Kant that “concept formation and theory formation go hand in hand.”³ Concepts are the building blocks of theories, and therefore good theories depend on good concepts. To pursue the analogy of Plato with which we began, it would be difficult to devise a good theory about the mechanics of how a chicken runs without the concept of “joint.” But the discovery of good concepts is, conversely, dependent on good theories. At the risk of pursuing the poultry analogy too far, we can note that this is the familiar chicken-and-egg problem.

The solution to the dilemma is, of course, a process of successive approximation, in which better theories lead to better concepts and better concepts lead to better theories. An important corollary is that we must be willing to discard old theories for new *and* old concepts for new.

It is the essence of theory that it organizes and simplifies the profusion of facts in the world. “Nature must be much simpler than she looks to us,” said the eminent biologist Albert Szent-Györgyi. “To the degree to which our methods become less clumsy and more adequate, things must become not only clearer, but very much simpler, too. Science tends to generalize, and generalization means simplification.”⁴ At a low level of generalization, concepts simplify facts; at a high level of generalization, theories simplify facts.

Structure and Theory in the Curriculum

In his much-quoted book, *The Process of Education*,⁵ one of Bruner’s two major themes is that elementary and secondary education should make much greater use of the structure of the disciplines. (The other major theme is that we can begin to teach that structure in the very early years.) The principal reason he

gives for the increased use of structure is very compelling: it simplifies the process of learning. Simplification is achieved in four ways: structure makes a subject more comprehensible; it facilitates memory of a subject; it contributes to transfer of learning from one subject to another; and it facilitates intuitive thinking.

Bruner scarcely mentions "theory" in *The Process of Education*, and one can surmise that he had two reasons for this omission. One reason could be that he did not want to frighten the people whom he wants to influence. The other could be that he wanted to emphasize the importance of many generalizations and relationships that belong to the theory family but are not complex enough to be called theories. Clearly he had in mind theories, or parts of theories, or incipient theories. His examples of structure include exercises in constructing units of measurement, in relating the Triangular Trade of the American colonies to the general need of people to trade, and in locating hypothetical cities on an unfamiliar map which shows only physical features.

Joseph Schwab has also stressed the importance of teaching the structure of disciplines. He argues that they should be a part of the curriculum; and, even more significant, that

they are important to teachers and educators: they must be taken into account as we plan curriculum and prepare our teaching materials; otherwise, our plans are likely to miscarry and our materials, to misteach.⁶

Science can no longer be considered a process of gathering, reporting, and summarizing facts, Schwab says. Progress in science depends on conceptions, on deliberate constructions of the mind. The conceptions tell us what facts to look for; it is impossible to look at everything. They also tell us how to interpret the facts; and the facts, when we try to fit them into our structures, may tell us that we should modify our structures.

Like Bruner, Schwab seems to shy away from "theory." He speaks freely of "principles," "laws," "patterns," "bodies of knowledge," "truth," and "inquiry," but avoids the terms "theory" and "theorizing." Structure, as Schwab defines it, is a *part* of the process of theorizing; but Schwab is clearly talking about theories and theorizing. His arguments for the use of the structure of disciplines are rich with examples drawn from theory—from biology and modern physics, for example.

Lawrence Senesh has been developing his "organic curriculum" since 1959.⁷ The organic curriculum is a well-articulated structure of concepts and relationships, based primarily on economics but embracing more of the social sciences as the basic idea has grown and been incorporated into curriculum materials. The curriculum is "organic" in two senses. Like a plant, it has a structure that matters; it can pass the "shuffle test." And, like a plant, it grows, beginning in the early years with a structure that contains the most important elements of the subject in simplified form, and growing in depth and complexity through successive grades.

Unlike Bruner and Schwab, Senesh has not been shy about mentioning "theory." The organic curriculum is intended to be a theoretical structure, in tune with up-to-date substantive and methodological findings in the social sciences.

Structure and Theory in the New Social Science Curricula

The major emphasis of the new social science curricula, as of the new curricula in the natural and physical sciences, is on the structure, theory, and methods of science—or on the concepts and syntax of the disciplines, as Schwab has put it. This is true of the Anthropology Curriculum Study Project, at the high school level; the elementary anthropology projects at Educational Services Incorporated and the University of Georgia; the "episodes" under development by Sociological Resources for Secondary Schools; the Developmental Economic Education Program of the Joint Council on Economic Education; the Senesh elementary economics program; the San Jose Economics 12 program; the high-school economics program at Ohio State University; the University of Chicago's Elementary School Economics program; the University of Michigan's elementary Social Science Education Program; the eclectic Projects Social Studies at the Universities of Illinois and Minnesota; and others. Some of these projects put more emphasis on teaching theoretical content, others stress the methods of investigation—"doing what scientists do"; all are designed to make greater use of the social sciences.

The situation is somewhat different with the new geography and history projects. These disciplines have never claimed a theoretical body of knowledge in the same sense as those possessed or being developed by the natural, physical, and social sciences. The High School Geography Project is making use of those limited bodies of theory which it shares with other disciplines—particularly

location theory, which it shares with economics, and cultural anthropology. To a greater extent, it is stressing the methods of geographers, particularly methods of observing and classifying natural phenomena, and methods of studying the effects of physical environment on the historical development of man.

The projects which are oriented primarily to history, at Carnegie Tech, Amherst, Northwestern and Educational Services Incorporated, making no claim to a body of theory, have gone all-out on methods of investigation. They are presenting their students with a fascinating array of original documents—diaries, news stories, maps, contemporary accounts, and so on—and challenging them to analyze and interpret them. Both deduction (“Do the documents support the judgments of history?”) and induction (“What do you make of the evidence?”) are encouraged, with induction a somewhat more popular approach.

A very useful contribution to conceptualization of the social sciences for curriculum purposes has been made by the Social Studies Curriculum Center at Syracuse University. Midway in its five-year project, it has recently published a booklet describing thirty-four concepts selected by its project workers and consultants as some of the most significant ideas on which to build elementary and secondary curricula.⁸ The list came out of hundreds of pages of background papers and numerous project conferences. One of the concepts, “Conflict—Its Origin, Expression, and Resolution,” is elaborated in a 24-page appendix, to show how rich a structure can be built upon one of the concepts.

The Syracuse list is made up of eighteen “Substantive Concepts,” including, for example, sovereignty, power, scarcity, habitat, institution, and social change; five “Value Concepts,” including dignity of man, empathy, loyalty, government by consent, and freedom-and-equality; and eleven “Concepts of Method,” including objectivity, interpretation, evaluation, and evidence. Most of these concepts cut across two or more of the established social-science disciplines. The list is a challenge to other projects to make available similar work they have done in the course of thinking about curriculum content.

An important purpose of documents such as the Syracuse publication is—like the purpose of this conference—to encourage dialogue early in the process of curriculum development. Let me begin the dialogue by raising a few questions about that publication.

First, should “basic ideas or concepts” be identified with “struc-

ture"?⁹ The book itself has a form of what I would call "structure"—the division of concepts into "substantive," "method," and "value." But it does not discuss the idea of structure. Nor is an effort made to build each group of concepts into a structure (that is, none of the three sections could pass the "shuffle test for structure"); this is a matter that the project will have to deal with when and if it develops an integrated course.

Second, what is the significance of listing "historical method and point of view" and "the geographical approach" as "concepts of method"? I suspect this is evidence that the project made no more progress than have most others in figuring out what is the relationship of geography and history to the (other?) social sciences. One searches the list in vain for a substantive concept to identify with history or geography, as "culture" is related to anthropology, "power" to political science, and "scarcity" to economics. These problems of kinship and paternity, suggested by the Syracuse list, also arise in the following chapters of this report.

Finally, what can be done with the "value concepts"? The Syracuse book discusses the problem posed by society's conflicting demand that the schools should teach "good citizenship," while avoiding "indoctrination." One can criticize the project for failing to resolve this dilemma with a clear statement of the proper role in the curriculum of its list of values, or of any list of values. But, of course, a clear statement *for* teaching "good citizenship" (and, therefore, in favor of indoctrinating) or *against* "indoctrination" (and, therefore, against teaching good citizenship) might bring down even greater criticism.

And Then What?

The general agreement on the part of many people in the new curriculum projects to make the social studies more analytical and scientific is the first chapter of what may be a very important book. But it will be a long time before the book is finished and the reviews and sales figures are in.

Many questions will have to be answered before the story is finished. Will there be too much or too little diversity of approaches, in the matters of content versus process, independence versus integration of the disciplines, and the like? Will the available resources for curriculum development be scattered among small and ineffective splinter groups, or dominated by a few

monopolistic sources of power? Is there sufficient awareness on the part of the new projects of the desires, needs and limitations of children, teachers and school systems? Assuming that the new projects have worthwhile innovations to offer, how can they help to solve the teacher-training dilemma: that in-service training on a broad front is beyond available resources and institutional possibilities, but that training new teachers to go into an environment that will not support innovations is ineffective? What will the academic departments in colleges and universities contribute? Will they abandon their single-minded, parochial interest in departmental majors and Ph.D's, to share with professional educators the difficult task of designing good programs for training the teachers upon whom the success of any new curriculum efforts depends? Will parents, school administrators and the public accept important innovations in the social studies; will they allow the scientific method to be applied to morality, religion, national history, sex, economic systems, and the family? Is the general assumption that children can learn more than they are now learning, with the same input of time and effort, a sound assumption? How can we find out whether the new curricula are really better than the old ones?

The story has just begun.



¹ Abraham Kaplan, *The Conduct of Inquiry; Methodology for Behavioral Science* (San Francisco: Chandler Publishing Co., 1964), p. 50. I have relied on Kaplan for a number of ideas in the following discussion of concepts and theory.

² *Ibid.*, p. 53.

³ *Ibid.*, p. 52.

⁴ Albert Szent-Györgi, "Teaching and the Expanding Knowledge," *Science*, 4 December, 1964, p. 1279.

⁵ Jerome Bruner, *The Process of Education* (New York: Vintage Books, 1960).

⁶ Joseph Schwab, "The Concept of the Structure of a Discipline," *The Educational Record*, July 1962, pp. 197-205.

⁷ Lawrence Senesh, "The Organic Curriculum: A New Experiment in Economic Education," *The Councillor*, March 1960, pp. 43-56.

⁸ Roy A. Price, Gerald R. Smith, and Warren L. Hickman, *Major Concepts for the Social Studies* (Social Studies Curriculum Center, Syracuse University, 1965).

⁹ *Ibid.*, p. 3.

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Concepts and the Structure of Knowledge

CHAPTER 2

I wish to talk about the nature of concepts, since we philosophers are specialists in generalities. I would like to approach the whole controversy concerning the nature of scientific concepts by way of an introduction that will serve as a framework for my discussion. I have written here a number of things that I don't believe; I intend to explode all of them. (See Figure 1.)

I shall speak from what I think is a moderate amount of consensus among recent philosophers of science. I will not try to explain what is being done, except to say that the major task that is perceived in the philosophy of science today is not so much trail blazing for future scientific discoveries, or formulating new scientific theories, but understanding science. Science is tremendously complex in this age, requiring a special effort merely to learn to understand it. Hence, philosophic clarification and conceptual analysis are of some significance from an educational point of view.

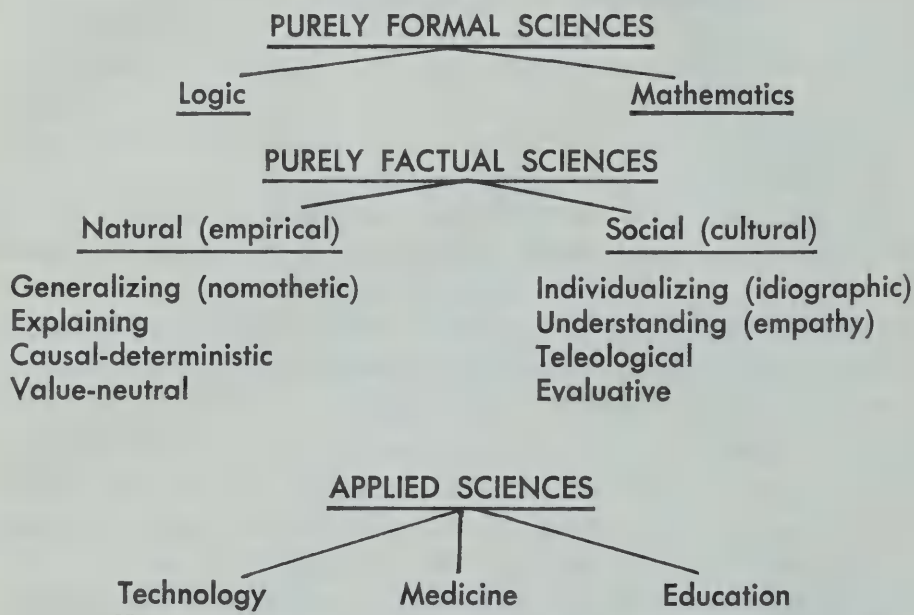
Before approaching the all-important issue of concepts and of grasping the meaning of concepts, I should like to discuss the division of the sciences.

The Division of the Sciences

The purely factual sciences, natural and social, provide the basis for the applied sciences. The distinctions made between the sciences are logical, not practical or historical, for there is tremendous interchange between all of these disciplines. It is perfectly clear that mathematics and some of the purely factual disciplines arose out of needs—physics, for instance. On the other hand, advances in mathematics, such as the tensor calculus and matrix algebra, were

applied in physics, after first being developed by mathematicians. I am not saying that there is not, from a psychological, practical, and historical point of view, a great deal of interconnection. It makes sense, for the sake of clarification, and especially for such clarification as might be needed in the educational enterprise, to make the following distinctions.

Figure 1



The truth claims or knowledge claims of the purely formal sciences do not ultimately rest on experience or observation, as do those of the purely factual sciences. Even on that there is some controversy; but I think it can be seen that, for example, the word "proof" means two entirely different things. When a mathematician talks about "proof" it is a logical derivation of a conclusion or theorem from a given set of premises, postulates, or axioms. If a chemist says, "I can prove it in the laboratory," the word "proof" obviously means something entirely different. He says, "I can show you. You will be able ultimately to check on my hypothesis or my knowledge claim, by observation, experiment, or statistical design." Ultimately, all of these go back to some form of observation.

I will skip the philosophy of logic and mathematics, vital and interesting though it is, and turn to the division of natural and social sciences. Certain German philosophers, late in the last

century and early in this century, established a fashion which, to my regret, has also appeared on the American scene. In this scheme the natural sciences are characterized by generalizing, the social sciences by individualizing; the natural sciences by explaining, the social sciences by understanding; and so on, as shown in Figure 1. It is these distinctions that I will criticize.

Generalizing versus Individualizing

It is said that the natural sciences are essentially nomothetic, generalizing, seeking formulae, making statements which tell what happens under what circumstances. The social sciences, by contrast, are individualizing. They are referred to as idiographic, a term derived from the Greek word referring to specific facts and specific individuals; for example, the heroes in history. Special descriptions in history, such as those of the art of the Renaissance or the music of the nineteenth century, are also idiographic, because they are concerned with specific periods of time in which certain types of things happened.

An extreme case makes the distinction clear. Newtonian mechanics and the law of gravity are generalized laws pronounced universally valid, generalized over all of space and time. However, a good scientist realizes that such a generalization can be valid only until further notice, and can be held only tentatively. That type of knowledge claim is made in any case. A historical incident such as the one found on certain plaques in New England, "George Washington slept here," is something that cannot be experimented about. Ascertaining by scrupulous scrutiny whether George Washington actually slept there can be done scientifically. Thus, something similar to the scientific method can be used in ascertaining historical truth. When contrasting theoretical physics with history, in the sense of a narration about individual events and individual persons, the distinction is quite clear.

Psychologists have, for a long time, tried to formulate laws of human behavior or of mental experience; they have been straddling the fence. Some branches of psychology are clearly natural-scientific in approach, such as the psychology of perception, the study of the sense organs, psycho-physiology, and neuro-physiology, to the extent that it sheds any light on psychological phenomena. All this has the makings of a natural science. Coming to the psychology of motivation and examining the role of behavior and attitudes of individuals in groups, psychology looks very much like social

science; and the Germans call it "Geisteswissenschaft." In English this means "spiritual science," but this literal translation would be misleading. "Cultural science" is a possible substitute.

There's something badly wrong with this distinction. Some natural sciences are clearly idiographic, and some social sciences are nomothetic. The idiographic-nomothetic distinction won't do. Physical geography, in locating mountains and rivers of the continents, is idiographic. Geographers state that Mount Elbert is the highest mountain in Colorado, and it has a certain latitude and longitude. That's as idiographic as "George Washington slept here." The geography of the moon, or the selenography, has been worked out by the scientists. Every mountain on the moon has an astronomer's name on it. That's also idiographic. Geology, to the extent that it traces the history of the surface of the earth and the formations of the mountain ranges, is idiographic. Yet, it is a natural science.

On the other hand, the social sciences, including psychology, have had some success in formulating laws that are highly confirmed by the evidence. Social scientists are making serious, and partly successful, efforts to formulate general laws; for instance, mathematical formulations in economics about the functional relations of supply and demand, prices, labor force, and so on. Similarly, sociology, learning theory, and theories of motivation in psychology are nomothetic. Skinner's work in the psychology of learning, his schedules of reinforcements, and the regularities that he has formulated are statistical laws about human behavior and animal behavior. In the light of such knowledge he is able to teach pigeons to perform many tasks. The idiographic-nomothetic distinction between the natural and social sciences does not hold up.

Explaining versus Understanding

It is often said that the natural sciences try to explain, whereas the social sciences strive for understanding in the sense of empathy. Empathy means knowing how a fellow human being feels. Empathy is different from sympathy, which implies affinity and approval.

Empathy is described as a method of arriving at some of the truths in social psychology, in the psychology of motivation, and in history—in understanding, for example, what historical personalities do at a given juncture of events. Important as is the technique of understanding in this sense of empathy, it is not a method of validation, nor is it a method of justification for knowledge

claims. Empathy may be an important source of "hunches," which are very useful in arriving at hypotheses; but empathy is not a means of testing hypotheses. Convictions based on empathy can be terribly wrong. Hypotheses must be tested in science, both natural and social, by an accepted method in which empathy plays no part.

Science by definition is intersubjective by its very conception. I use "intersubjective" in preference to "objective" because of the numerous definitions of the word "objective." There's subjective objectivity and objective subjectivity. "Intersubjective," I think, is fairly clear. The word is built in analogy to the word "international" or "inter-racial" or "inter-religious." The idea is that science is intersubjective in the sense that anyone equipped with the necessary intelligence and the requisite apparatus can check up on the knowledge claims of others—of the astronomer, the nuclear physicist, the biologist, the social psychologist, etc. No matter how strong the empathy-based subjective conviction is, it can be badly wrong. Ideas still may have to be corrected in the light of such intersubjective or objective tests as science has at its disposal.

Causal versus Teleological

The concept of scientific explanation has undergone tremendous changes. An important transformation in the history of scientific thought has changed the whole concept of scientific explanation. In classical antiquity, a true explanation was one that started with premises which are neither in need of proof nor capable of proof. This was the case, for instance, with mathematical axioms. Nowadays postulates are preferable to axioms, assumptions preferable to first principles, but these are just verbal changes. The important thing is the change in attitude that came with the Renaissance and people like Galileo and Newton who introduced the idea of *empirical confirmation* of premises.

Explanation is, in a twofold way, always relative. Its premises are relative to the empirical evidence, upon which they ultimately stand or fall. They are relative also in the sense that the premises upon which the explanations are based themselves remain unexplained within the context of that explanation. With luck, an explanation for these may be found on a higher level.

A simple example is found in everyday life. Hands get warmer when rubbed together. The intelligent child might ask, "Why do they get warmer?" Daddy replies, "Friction always produces heat and this is a case of friction. Hence, your hands get warmer." An

ordinary Aristotelian syllogism is the method of explanation here. But then a really inquisitive child might ask, "Why does friction produce heat?" Daddy is stumped if he hasn't studied physics. If he has, he can draw upon thermodynamics and say that mechanical energy in the process of friction is transformed into calories of heat. If the child further asks, "Why is it that mechanical energy can be transformed into heat?" there is still another answer to that, namely the molecular or kinetic theory of heat. This illustration sketches the levels of scientific explanation in the natural sciences.

It is said that the natural sciences use causal analysis in their explanations. The laws formulated, especially on the lower levels of scientific explanation, are often causal laws in that they state regularities concerning the sequence of events. Friction and heat, lightning and thunder, the deviation of a magnetic needle near an electric current, are all formulated by using the concepts of cause and effect. Thus, many concepts of cause and effect are perfectly good in everyday life, even though philosophers of science still have some important unanswered questions about the nature and meaning of causality. Equations are written such as the gas law, $PV=RT$, a formula which holds to a certain degree of approximation. The formula is mathematical, but the content is a formulation of empirical regularities. It indicates that if the pressure on the gas is increased the volume may be decreased or the temperature increased.

The concepts of cause and effect make good sense in the social sciences. Of course it is often hard to perform a causal analysis. What caused the First World War is a complex question. A classroom lecture can't indicate that the causes of the First World War were such and such. It is a complex constellation of circumstances. However, it is not impossible, and responsible books have been written about it.

It is said that in the social sciences causal analysis is replaced by the teleological. Explanations are elicited by asking the question, not "Why?" in the sense of what caused it, but, "What for?" The accusation of being teleological once was equated with being unscientific, but this view is changing. Biologists, who repudiate teleology as a philosophy, explain the functioning of the heart and liver partly in terms of the functions they perform in the body. There are many such statements in science which sound teleological. It may not be desirable to call them true explanations, but they may state some necessary condition, thus aiding understanding of how these things work. An important book, *Cybernetics*, by Norbert

Wiener, which appeared in 1948,¹ has finally made clear that teleological mechanisms may be spoken of without contradiction when dealing with systems in which there are interdependencies and feedback, such as with the home thermostat. Wiener created a new discipline called cybernetics, a name based on the Greek word for governor. His work has led to some exciting developments in biology and in physiology, which give a causal explanation of an interesting kind. The French call it circular causality. It accounts for homeostatic phenomena, such as the question of why the blood sugar level remains roughly the same.

Homeostasis has also been used by some psychologists. For example, an Austrian psychologist has said that there is a homeostasis in personal self-concept. If a person is criticized or if someone tries to lower his ego concept, he somehow restores it by rationalization. He reacts to criticism because he likes to keep his self-respect on a certain relatively stable level. There is a certain self-adjustment that takes place even in the scholarly world. A scholar who gets a bad review of something he has published may say to himself, "The reviewer is an idiot." He protects his self-concept by this bit of homeostasis. How this works neuro-physiologically conceivably might be explained by certain brain mechanisms.

Value-Neutral versus Evaluative

It has been said that the natural sciences are value-neutral, but that the social sciences are evaluative. I think that is wrong, too.

There is no question that we deal with values in the social sciences. Nothing could be more interesting and more important than the evaluations that individual people and certain groups of people make. But such judgments are not made by social scientists, *qua* scientists. Evaluation depends ultimately on personal commitments and is not derivable from factual statements alone. Studying evaluations is different from *making* evaluations. The psychologist studies motivation, and the anthropologist studies the moral codes and values of the Eskimo. But if the anthropologist says that the Eskimos are wrong because they aren't Christians, that is an evaluation made by the anthropologist as an individual, not as a scientist.

Concepts

Turning from the alleged differences between the natural and social sciences, another important matter can be taken up.

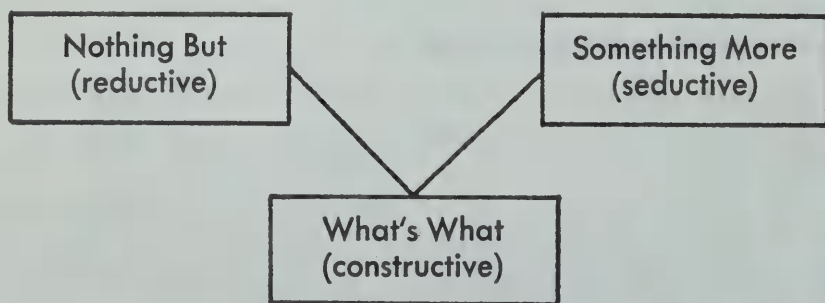
There is a classical, fundamental distinction between proper

names and concepts. A proper name refers to some particular object. A concept is a generalized notion about objects or ideas. Plato made this a metaphysical distinction, declaring that concepts have an existence of their own, in a super-heavenly place far beyond everything that is perceptible. Everything in man's experience is an imperfect copy of these eternal ideas and ideals.

At the other extreme from Plato's idea is the nominalist view, which says that the only really meaningful words are particular words; that is, proper names. This view negates the whole idea of concepts. It will not do, because concepts have a function; they do something useful in thinking. On the other hand, Plato's metaphysics of ideal concepts with an independent existence in some super-heavenly place is also extreme (although he may have been using poetic license in order to emphasize the contrast between concepts and particular things).

When faced with extreme alternatives of this kind, I often find it useful to use a little dialectic of my own. In the case under consideration, I would call the nominalist view of things a "nothing-but" philosophy; it indulges in the reductive fallacy, failing to see

Figure 2



any but the most obvious things. The Platonic view, if taken at face value, illustrates a "something-more" philosophy; it indulges in the seductive fallacy, reaching out for more than is warranted by the facts and the logic of the situation. The synthesis of the two extremes I call the "what's-what" philosophy; it is constructive, preserving that which is best and most reasonable of the two extreme positions.

This little dialectic is diagrammed in Figure 2. Women's fashions provide another illustration of its use. Bikinis illustrate the "nothing-but" philosophy, Mother Hubbards the "something-more" view, and decent dress the constructive "what's-what" resolution of the extremes.

In the dispute over concepts, between realistic nominalism and Platonic idealism, my own (constructive) point of view may be summarized as "a concept is what a concept does." Concepts are represented by words and symbols which we use according to certain rules, being careful about understanding and applying these rules. I do not know exactly what word to use to explain the right approach to the use of words and symbols. Operationalism—defining concepts in terms of identifiable and repeatable operations—has been useful, but has led to excesses on the side of the reductive fallacy. Functionalism might be acceptable, if taken to mean a careful statement of the rules according to which words and symbols are used.

A Hierarchy of Concepts

Between the heavenly mysteries of Platonic idealism and the absurdities of nominalism, different levels of generality of the concepts we use can be distinguished. The least general of these is the descriptive level. Just above the descriptive level, in the hierarchy of generality, are empirical laws, and above these are various levels (as many as three) of theory. These levels can be illustrated by the example given above. The descriptive fact is that hands get warm when rubbed together. The empirical law is that friction produces heat. Above the empirical law at the first level of theory, there is classical thermodynamics. At the next level is statistical mechanics, or the kinetic theory of heat; and, finally, at the most general theoretical level, quantum mechanics.

As we go up in the hierarchy of theory we encompass more and more facts. The aim of scientific explanation, the ideal that guides the search for scientific explanation, is to explain a given set of facts with a minimum of basic concepts and principles. The higher the level of theory, the greater the number of facts that can be explained with a given number of concepts and principles. Newton's laws explain more than Kepler's, and Einstein's more than Newton's.

The social scientists, like the natural scientists, strive to discover high-level theories which will explain many facts with a few simple concepts. An example is the common idea that much of history can be explained by the personalities and abilities of heroes. The Marxian view is almost the opposite—that certain social changes will occur when their time has come, and that people can always be found to fulfill the role of hero. I think the truth lies somewhere

in the middle; key individuals occasionally have a remarkable influence on history, but broad social forces are also very important.

I will conclude by applying some of my remarks to a question that is bound to arise.

Is History a Science?

What would have happened if I had not had anti-freeze in my radiator when the temperature dropped to 25 below zero? This is a question that can be answered simply and convincingly by an appeal to scientific evidence. What would have happened if Hitler had not been born? This is the same kind of question as the one about my radiator—much more difficult to answer, of course, but not an illegitimate question.

The historian scrutinizes evidence very carefully, reconstructs past events on the basis of currently available evidence, and makes careful inferences. These are scientific endeavors. If, in paleontology, the tracing of the evolution of life on the surface of this planet is scientific, I do not see why cultural history, the history of art, the history of literature, and the history of music are not also scientific.

Historians are also performing a part of the scientific task when they describe events. Reliable descriptions are important in every science, even though they are, to the philosopher of science, less exciting than theories.

If by science one means the formulation of general, reliable laws, then history has not, so far, been very scientific. However, some historians have attempted to support some generalizations about history. Spengler and Toynbee, for example, have suggested some broad rules about the rise and decline of civilizations. But these attempts are generally precarious, and usually unsuccessful.

One way to improve explanations for historical phenomena would be to use the terms of the various sciences, rather than historical terms. I would look for the roles played in the historical process by economic, sociological, political, and psychological factors. In any case, it is an exceedingly complex problem, but so are many of the problems of the natural sciences, such as in meteorology and astrophysics.



¹ Norbert Wiener, *Cybernetics; or Control and Communication in the Animal and the Machine* (Cambridge: Technology Press, 1948).

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Organizing a Curriculum Around Social Science Concepts

CHAPTER 3

For years professional associations and social science educators have defined and redefined the objectives of social studies education. Volumes have been written about the behavioral changes, the skill objectives, and the changes in attitudes that social studies education is expected to achieve. Many of the statements emphasize that the purpose of social studies education is indoctrination of values. The National Council for the Social Studies has emphasized for years in its publications that the ultimate goal of education in the social studies is the development of desirable socio-civic behavior and the dedication of youth to the democratic society. Fundamentally, nobody would object to these goals if the students could achieve this behavior through the rational analysis of society. But in most of the statements indoctrination of values is emphasized at the expense of analysis.

The Need for Analytical Thinking

The primary function of the development of analytical thinking is to help our youth understand the structure and the processes of our society. With possession of analytical tools, our youth will be able to understand the dynamic changes of our society and the problems created by science and technology. In the final analysis, the purpose of social science education is the development of problem-solving ability. By acquiring the analytical tools and the skill to apply the tools to the problems, our youth will feel that, as adults, they can participate intelligently in the decisions of a free society. The development of the problem-solving ability will help our young people to gain respect for social sciences as an organized body of

knowledge and will motivate them to choose social science as a professional career. This emphasis is neglected in the guidance programs in our schools.

The correct use of analytical tools and the discovery of the ideas underlying the social process require a particular mode of analytical thinking. The development of analytical thinking requires a long process of conditioning. Such conditioning should start in grade one of the primary grades.

The present social studies program does not offer the proper intellectual framework to develop the analytical faculties of our youth. Social studies educators who have tried to identify generalizations for the social studies curriculum have suppressed the unique characteristics of the individual social science disciplines and formulated concepts so general that they are without analytical content. Since social scientists have not yet achieved a unified theory of society, economists, sociologists, political scientists, and anthropologists observe society from different points of view, and their findings have to be superimposed on each other before social change can be understood. Since all the social science disciplines are necessary to explain social phenomena, the fundamental ideas of all the disciplines should be introduced in the school curriculum. Why not in grade one?

Grade Placement of the Social Sciences

Some academicians interested in the social science curriculum have raised the question many times whether social science instruction should not begin with geography and history. In an article, "The Structure of the Social Studies,"¹ Professor Scriven recommends that social science education start with geography and history in grade one. He justifies beginning with history and geography because the generalizations are less "high-falutin'" and nearer to common sense. He would rather introduce a "low-falutin'" approach in the lower grades, hoping that "high-falutin'" understanding will develop later. The history of the social studies curriculum indicates that a curriculum begun as "low-falutin'" will remain "low-falutin'."

Professor Scriven does a disservice to geography and history when he assumes that a geographic or historical phenomenon can be explained meaningfully without the aid of the various social science disciplines. Primary school children study Indians and the colonial period, but since they do not possess the fundamentals of economics,

political science, sociology, and anthropology, their learning is trivial. It would make more sense if geography and history were culminating courses in high school. In the intervening years the children could have learned the fundamental ideas of the various social sciences, thereby enriching the geography and history courses.

The Organic Curriculum

A team of social scientists has worked with me during the last two years to outline the fundamental ideas of the various social sciences. This team includes Professor David Easton, Political Science Department, University of Chicago; Professor Robert Perrucci, Sociology Department, Purdue University; Professor Paul Bohannan, Anthropology Department, Northwestern University; and Professor Peter Greco, Geography Department, Syracuse University. These fundamental ideas of the various social sciences represent:

- a. a logical system of ideas;
- b. the cutting edge of knowledge; and
- c. an organization of ideas that can be used at every grade level.

Presenting the structure of knowledge in this way challenges popular curriculum practices based on minimum understandings broken up and parceled for different grade levels.

Our team has been guided by the awareness that we are training children for an age which we don't even foresee. We are giving the children knowledge that we want them to use in the 21st century. A hundred years ago the idea that our children are a generation ahead was a platitude. Today it is a drama. No longer can parents understand their children when they come home from modern mathematics or modern science classes. The stage where parents will not understand their children when they talk about the nature of society will soon be reached.

After we had formulated the fundamental ideas of the social sciences, I visited first grade classes to find out how many of these ideas could be related to the first graders' experiences. I found that the children's experience in social matters is potentially so meaningful that the fundamental structure of knowledge can be related to their experience.

After we found this out, we formulated the next question. If we teach all these fundamental ideas in the first grade, what can we teach in the second grade? The same structure of knowledge, only now with increasing depth and complexity. And in the third grade

we teach the same structure but with still greater depth and complexity, as the child's experience grows.

On a scope and sequence chart, all concepts are listed vertically, and all grades are shown horizontally. Since every concept is taught in every grade, the scope and sequence chart should show in the first column, for the first grade, very pale checkmarks. In each grade the intensity of the checkmarks is increased until the darkest color is used for the twelfth grade, indicating that the same concept has been taught with increasing depth and complexity. The question arises as to how this can be done.

How can political science, sociology, economics, and anthropology be taught all in one grade, particularly the first grade? This is a new art, I think, which I call the orchestration of the curriculum. Units have to be constructed in such a way that different units give emphasis to the different areas of the social sciences. In some units the sociologist plays the solo role while the other social scientists play the accompaniment; then the economist is the soloist, then the anthropologist, and so on.

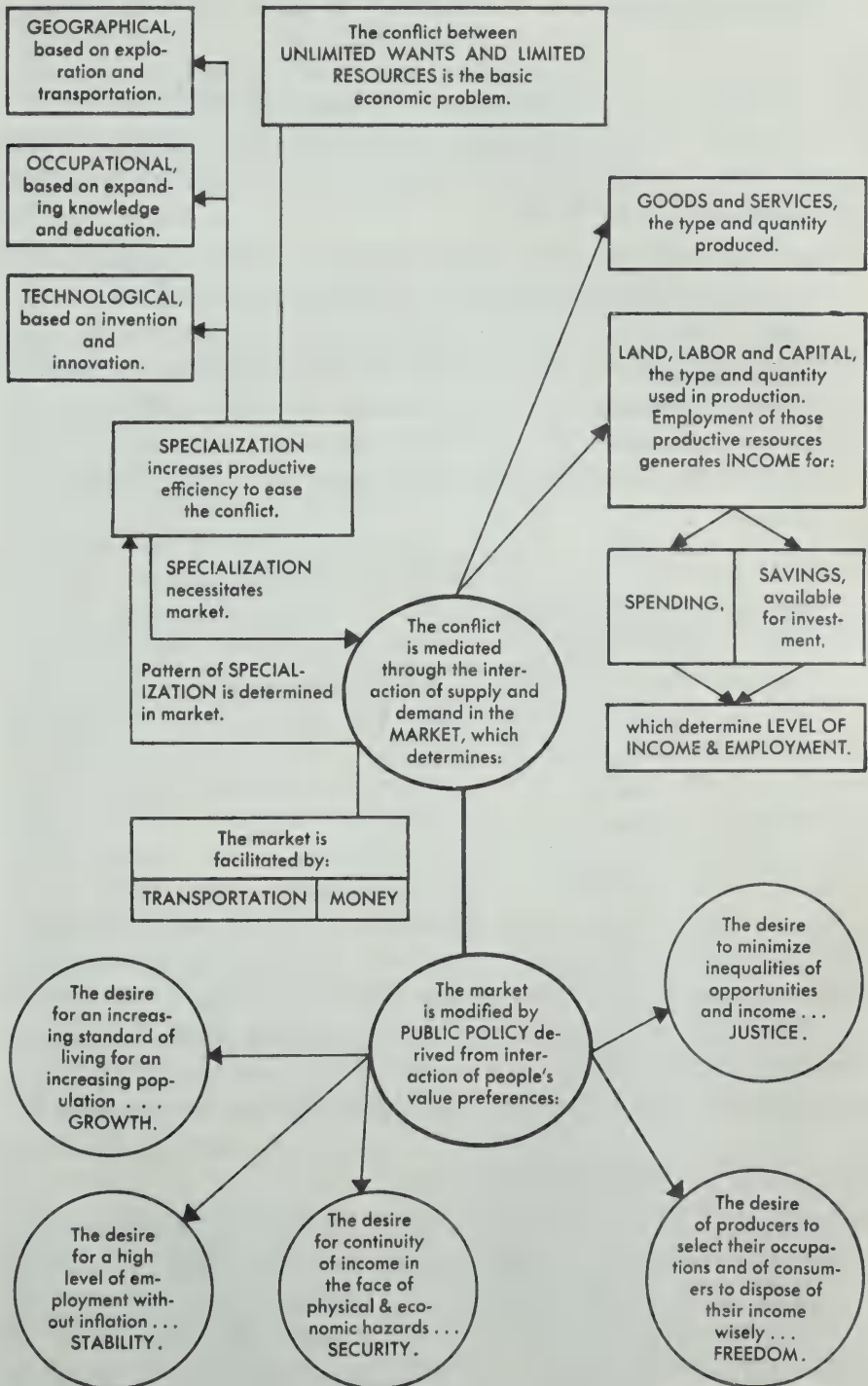
The first element of my approach, taking the fundamental concepts and teaching them with increasing depth and complexity, I call the organic curriculum because these concepts are not presented atomistically between grade one and grade twelve. They are introduced all at once and grow with the child, as he moves from grade to grade. I call the second element the orchestration of the curriculum. The child may not know that the sociologist is talking to him, or the economist, or the political scientist, nevertheless he will be exposed to the social science disciplines in an undiluted form.

Fundamental Ideas in Economics

The solo role of the economist can be illustrated by the following development of fundamental economic ideas. The same ideas and relationships are shown in chart form in Figure 1.

1. The central idea of economics is the scarcity concept, namely, that every society faces a conflict between unlimited wants and limited resources.
2. Out of the scarcity concept a family of ideas emerge. Because of scarcity, man has tried to develop methods to produce more in less time, or more with less material and in shorter time. Various types of specialization were discovered in order to

Figure 1
FUNDAMENTAL IDEAS OF ECONOMICS



overcome the conflict between unlimited wants and limited resources. We specialize geographically, occupationally, and technologically. The third family of ideas grows out of specialization.

3. Because of specialization, we are interdependent; interdependence necessitates a monetary system and a transportation system. The fourth idea emerges from the first, scarcity, and from interdependence.
4. Men had to discover an allocating mechanism and this is the market, where through the interaction of buyers and sellers price changes occur. Prices determine the pattern of production, the method of production, income distribution and the level of spending and saving, which, in turn, decide the level of total economic activity. The fifth family of ideas grows out of the fact that the economic system is a part of political society.
5. The market decision is modified by public policies, carried out by the government, to assure welfare objectives. These welfare objectives are determined in the United States through the political interaction of 200 million people which generates thousands of welfare objectives which I have reduced to five: our attempts to accelerate growth, to promote stability, to assure economic security, to promote economic freedom, and to promote economic justice.

These are the fundamental ideas of economic knowledge which we try to incorporate at every grade level, always with the objective in mind that these analytical tools should help the students analyze the cause of a problem, to measure its scope, to develop some solutions, and to measure the dislocations which have been caused by the attempt to solve it. We try to put the problem in a dynamic context and then see what other dislocations are created.

Teaching Applications of Economics

Now I would like to present a few ideas on how I relate these economic concepts to the child's experience. The first grade child recognizes the scarcity concept because he lives it. He goes to the A&P and he recognizes that he cannot have everything which is on the shelves. The "three wish" fairy tales reflect men's yearning to close the gap between unlimited wants and limited resources.

Cut-outs from the *National Geographic Magazine* and other pictorial material can dramatize the different degree to which nations have satisfied their people's wants.

Division of labor can be dramatized with the children by using simple experiments in the classroom. The class may organize two teams. One team executes a production process, such as making gingerbread boys on an assembly line, while the other makes them without using the division of labor. The time keeper decides which of these teams has been able to produce a given amount in less time and with less waste of tools and materials. Children discover division of labor in the home (where each family member does a particular job), in the neighborhood, in the city, in the nation, and in the world. Children discover the division of labor between men and machines. All these kinds of specialization introduce to children the ideas of international trade and mass production. In many classes, the teacher associates the children's discoveries with those of Professor Adam Smith and Mr. Henry Ford. Such identification of the child's experience with the experience of the big society is necessary to the success of this program.

Children's literature is full of delightful stories that can underpin specialization and the resulting interdependence. Through stories and games the children learn that trading would be much more complex if we could not use money as a medium of exchange.

In the second grade, the children can develop models for perfect and imperfect competition, and they can simulate the operation of the market. To dramatize the principle of perfect competition, the children may become wheat farmers one morning. Each child can represent the farmers of the different wheat-growing countries. The teacher can play the role of the broker whose task is to sell the farmers' wheat at the best possible price. At the end of the harvest the farmers report to the broker how much they have produced. The weather was good throughout the world, and since the game limits each country's production to two truckloads, the farmers from Australia, Canada, U.S., U.S.S.R., and Argentina ask the broker to sell their two truckloads at the best possible price. The broker starts an auction among the rest of the class who are the buyers. Their ability to bid has been limited by the toy money the teacher has given them. The bidding starts at a low price and as the buyers bid for the ten truckloads, the price moves up toward an equilibrium price at which all the wheat that has been offered for sale can be sold. The children discover the most important

characteristic of perfect competition—the lack of control of the market by producers and consumers. The class may extend to another period when the harvest was twice as good as before. The children will be surprised to learn that the equilibrium price will be so low that the farmers' earnings will be smaller than previously when the farmers brought the smaller quantity to the market. This activity introduces to the children the concept of elasticity of demand without its being identified as such.

To dramatize imperfect competition, some children in the class may play the role of inventors, manufacturers, and owners of grocery stores. The game will help children discover that all these producers can control the market in different degrees. The class discussion can bring out how these different degrees of control affect the producers' power to set prices.

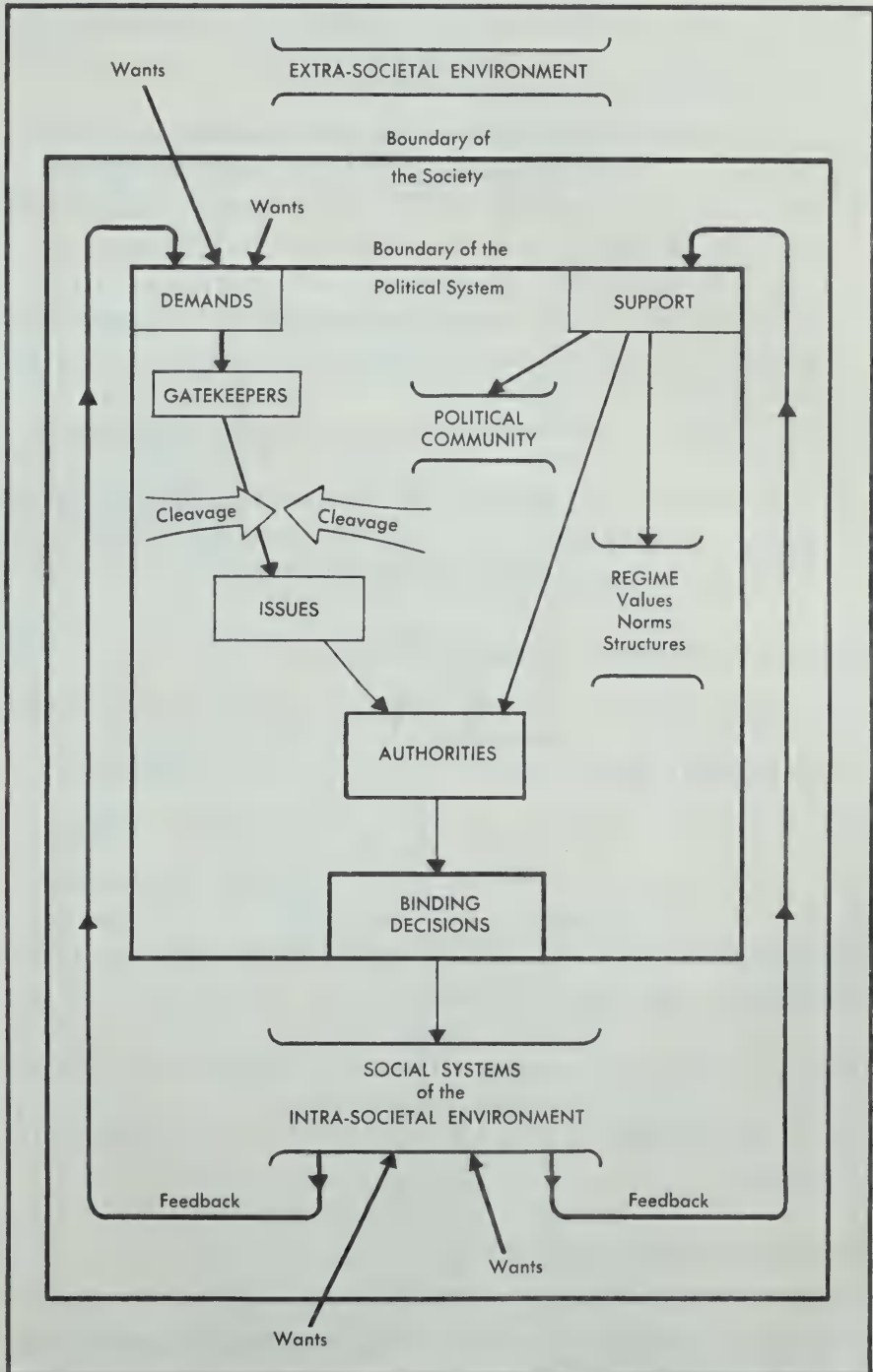
Discussion finally gets to public policy, where the children decide what goods and services will be purchased together. Many goods and services are not purchased by each family but purchased together. The Mayor, the Governor, and the President of the U.S. each prepare a long shopping list. Discussing the lists, some people think they are too long and others think they are too short. When they agree upon the proper length of these shopping lists, taxes are collected. The people may decide to pay for a part of the list from tax monies, and to pay for the rest by borrowing money. If they don't want to pay taxes, they have to go into debt to buy goods and services together.

Fundamental Ideas in Political Science

The important idea relationships of political science were defined just as with economics. Figure 2 shows the systems analysis of political life which Professor David Easton of the University of Chicago has developed. This chart contains the following ideas:

1. Members of society have many wants which they hope to satisfy.
2. Some of these wants will be satisfied through the economic system, family system, educational system, and religious system. Wants that cannot be satisfied by any of these systems are channeled to the political system.
3. As the people's wants enter the political system for satisfaction, they become demands. These demands are screened.
4. The screening process operates through formal or informal organizations. These organizations act as gate keepers. Some

Figure 2
SYSTEMS ANALYSIS OF POLITICAL LIFE



of the demands vanish. Others become issues debated in the political community (a group who share a desire to work together as a unit in the political solution of problems).

5. The issues are molded by cleavages in the political community and by the authorities which translate these demands into binding decisions.
6. The binding decisions affect the social systems and the participants in them, generating positive or negative support.
7. The support may be directed toward the political community, toward the regime (a political system which incorporates a particular set of values and norms, and a particular structure of authority), and/or toward the authorities (the particular persons who occupy positions of political power within the structure of authority).
8. The binding decisions generate new wants which appear again at the gate of the political system asking for recognition.
9. The source of the support for the political community, regime, and authorities may originate from the social systems in the form of education, patriotism and other mechanisms.

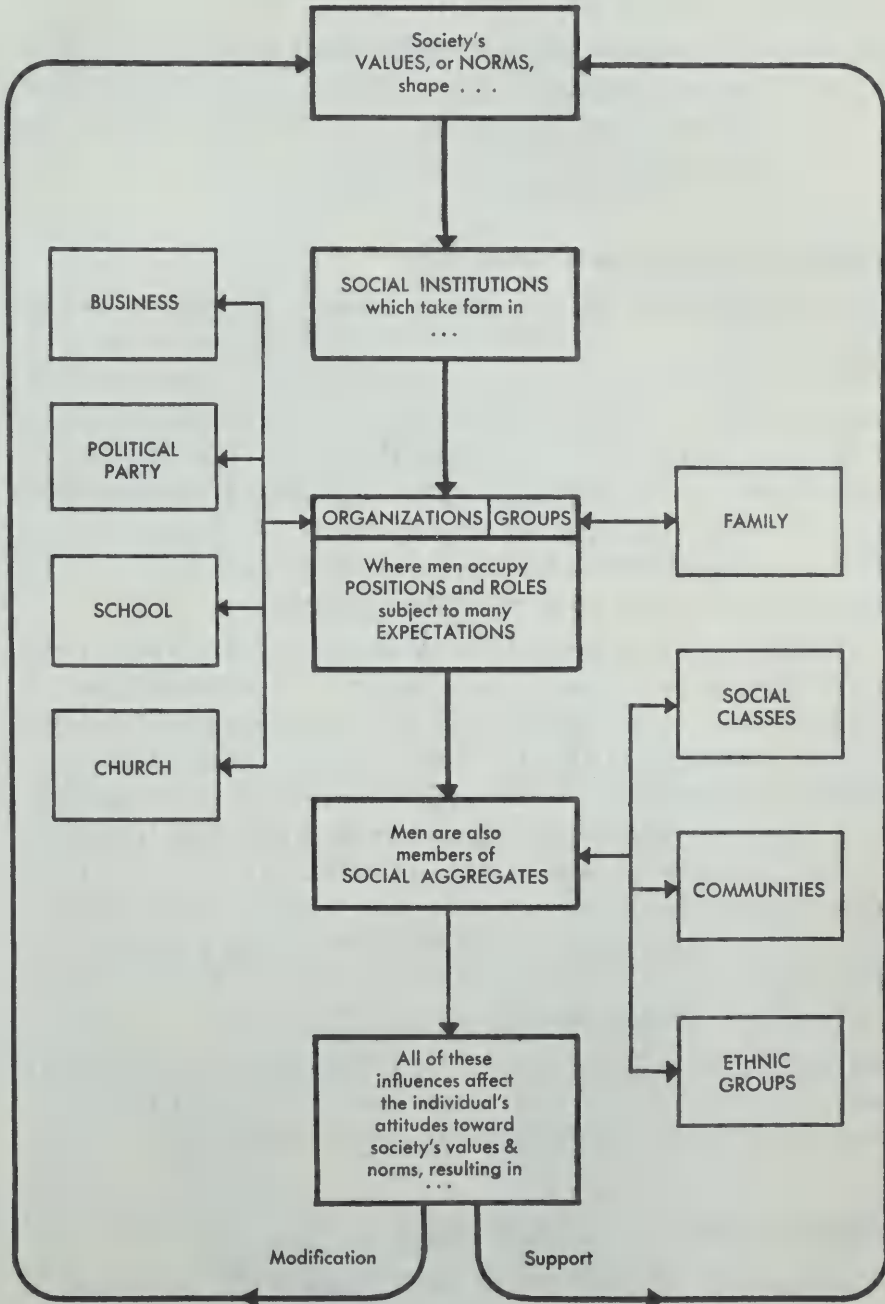
Teaching Applications of Political Science

In the same way that the fundamental ideas of economic knowledge can be related to the child's experiences, we can also relate the fundamental ideas of political science on every grade level. The home is a good example of how the innumerable wants of the family are satisfied through the various institutions, and of how many of the wants are exposed to the political scrutiny of the members of the family before they become the rules of the home. The discussion about the various forces which keep the family together has a striking resemblance to the different types of supports which keep the political society together. Looking upon the political system in this way is a fundamental departure from the present civics curriculum where the main emphasis is on description of the legislative, judicial and executive branches of the government.

Fundamental Ideas in Sociology

Professor Robert Perrucci of Purdue University has developed a fundamental structure of sociology which is already in use in experimental classrooms. The core idea is that of values and norms. The system is illustrated in Figure 3.

Figure 3
FUNDAMENTAL IDEAS OF SOCIOLOGY



1. Values and norms are the main sources of energy to individuals and society.
2. Societies' values and norms shape social institutions, which are embodied in organizations and groups, where people occupy positions and roles.
3. People's positions and roles affect their attitudes toward society's values and norms, and result either in support of the existing values and norms, or in demands for modification of them, and the circle starts again.

Teaching Applications of Sociology

The conceptualization of sociology makes it possible to develop units in the primary grades which will make children aware of the importance of predictable behavior among people. Units may show how the ability to predict human behavior creates orderliness in the family, neighborhood, city, and the world. The teacher can demonstrate through experiments how unexpected situations have both very funny and very sad consequences. Children's plays can bring out that the school, business and family could not exist without predictability and order in human behavior.

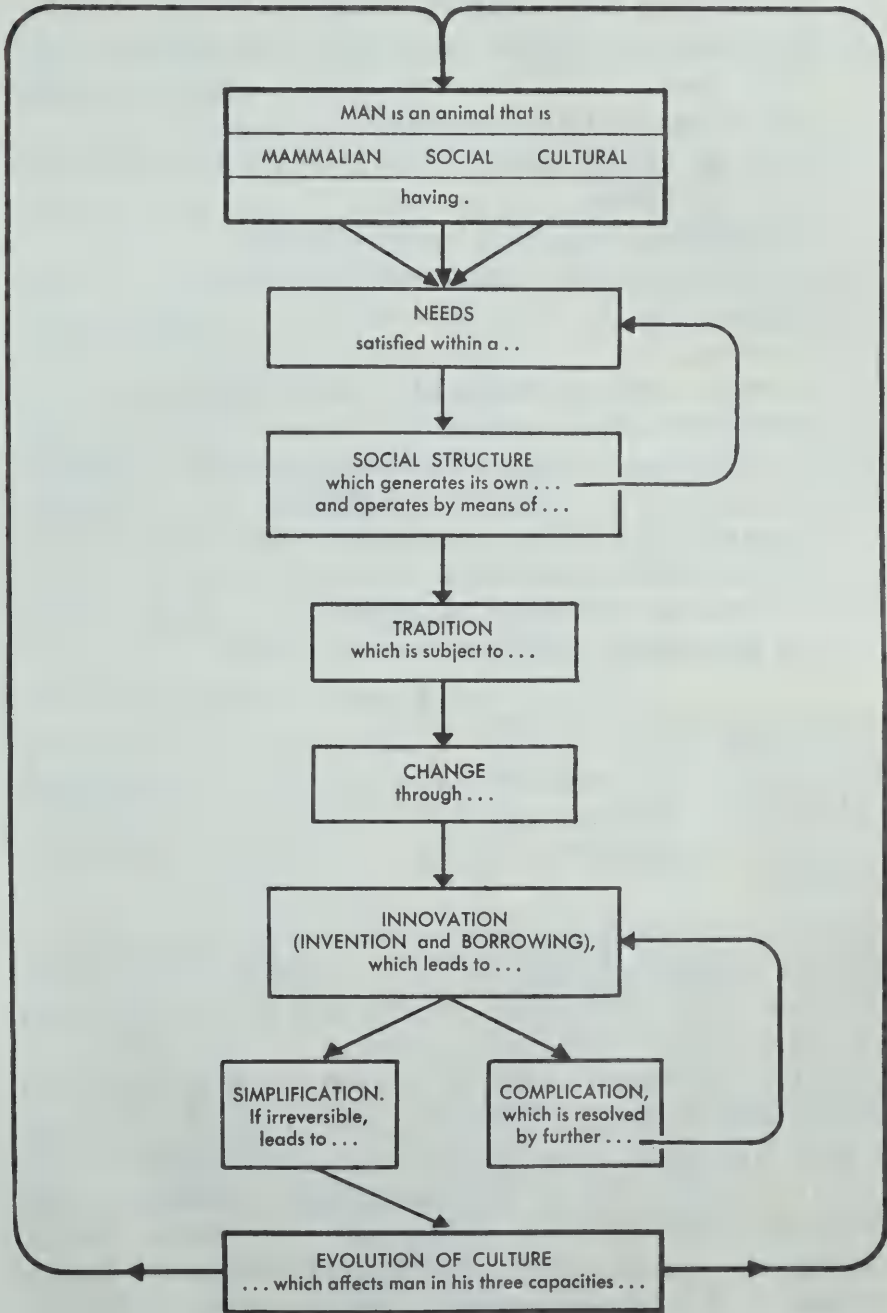
The many positions men take in society can be observed at home. The children may prepare charts showing the different positions fathers, mothers, and children take and the difficulty of fulfilling all the expectations attached to the positions. The children can show that, depending on which positions we think more important or less important, and depending on our ability, we can fulfill some positions better than others. The story of *The Ant and The Grasshopper*² points out effectively the value preferences of the two. The children can also observe and experiment in the classroom how men's positions, due to science and technology, and due to change in ideas, have changed during history.

Laying the foundation of sociological concepts in the primary grades helps children to understand later how interplay between values and institutions brings about social reforms.

Fundamental Ideas in Anthropology

Fundamental ideas of anthropology have been developed by Professor Paul Bohannon of Northwestern University. Figure 4 shows the following idea relationships.

Figure 4
FUNDAMENTAL IDEAS OF ANTHROPOLOGY



1. Man may be looked upon as a
 - a. mammalian animal,
 - b. social animal, and
 - c. cultural animal.
2. Man, in these three capacities, has needs.
3. Man's needs are satisfied within a social structure.
4. Social structure itself has needs (called "requisites") which must be satisfied if it is to persist.
5. Needs are satisfied within a particular set of patterned behavior: tradition.
6. All traditions leave some wants unsatisfied.
7. Dissatisfaction leads to changes in traditions.
8. Changes take the form of invention and borrowing: innovation.
9. Innovation leads to complication and simplification.
10. Complication leads to social dislocations. Problems caused by dislocations may be resolved through further innovations.
11. If simplification is of such a magnitude that it forms an irreversible base for man's behavior (for example, the use of fire), it leads to evolution of culture.
12. The evolution of culture affects man in his three capacities as a mammalian, social, and cultural animal.

Teaching Applications of Anthropology

The conceptualization of anthropology in this way will enable the elementary school curriculum builder to develop meaningful units on such conventional subjects as the Eskimos and the American Indians.

A unit on the Eskimos, for example, demonstrates how acceptance of the idea of money changed the life of the Eskimo. The Eskimo in our unit acquired his food, clothing, and part of his shelter from caribou. The scarcity and his nomadic life affected his value system. Then he found out that far away there was a trading post where Eskimos could trade silver fox pelts for articles which he had never had before. Our Eskimo family stopped hunting and started to trap silver fox to use as a medium of exchange. The family settled down near the trading post in an Eskimo village. There was less uncertainty here. This story presents to the children evolution in the Eskimo culture. Living together with other Eskimos created new problems. The family's needs changed. Their desire for learning increased. The changes came about because

money as a medium of exchange had been accepted by the Eskimo family.

In the higher grades, the conceptualization of anthropology will help the curriculum builders to develop units which will show how the development of underdeveloped areas and the pursuit of nationalism affects people's tribal loyalties and changes their physical, social and cultural needs.

These are the four areas of social science in which we have tried to formulate the fundamental idea relationships. Deliberately, we are leaving the areas of history and geography to the last stages of our inquiry. The reason is that these two areas have a different character from the other social sciences. They have to borrow many of the analytical tools of the other areas of the social sciences to explain a geographic area or the processes of history. Until now history and geography in the elementary and secondary school curriculum have been mostly a narrative of men's actions and a description of their environment. Now, our team of social scientists hope to use their analytical tools to explain cause-effect relationships in man's actions in time and place. Using the analytical tools of social scientists, the children can begin to simulate the historians' and geographers' methods of inquiry.

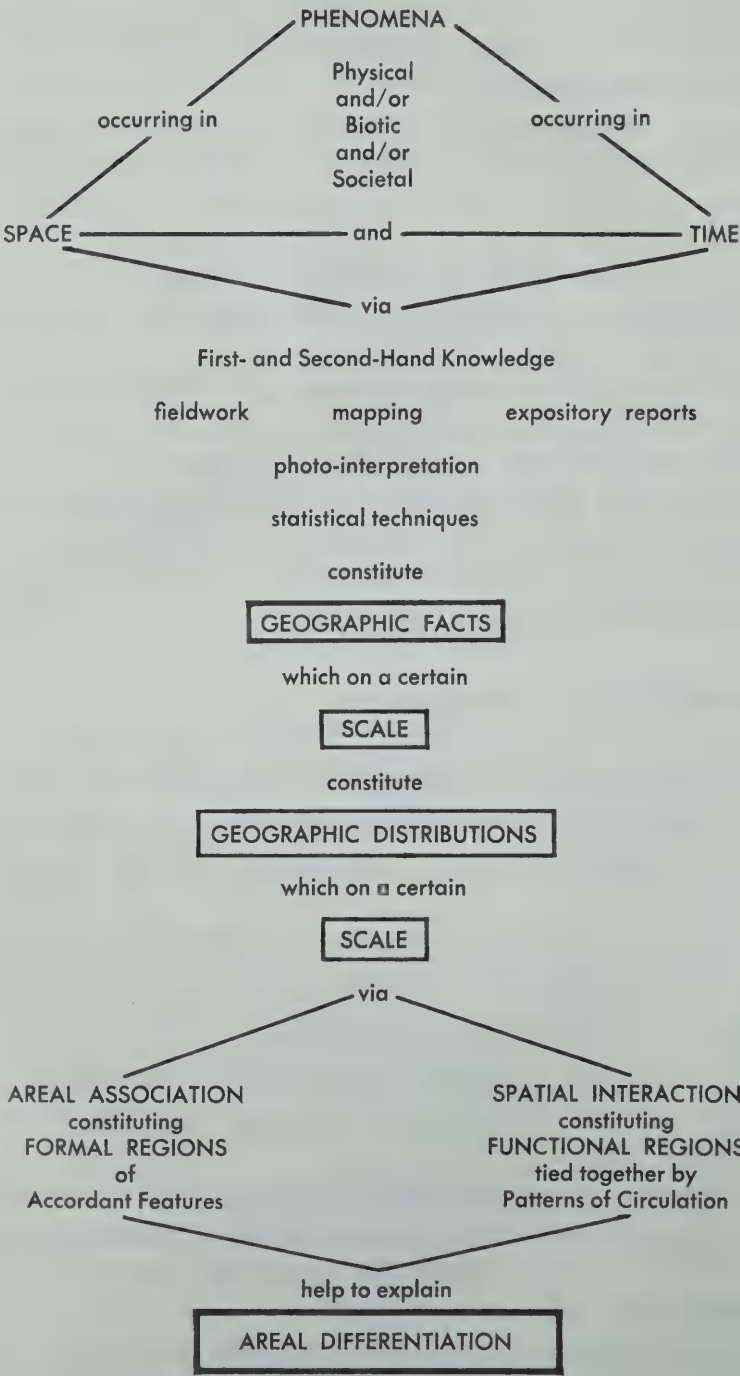
Fundamental Ideas in Geography

The scope of the geographers' inquiry has been worked out by Professor Peter Greco of Syracuse University. The fundamental ideas in geography are shown in Figure 5, and described below.

1. Every geographic area is affected by physical, biotic, and societal forces.
2. The impact of these forces on a geographic area creates similarities among areas. These similar areas are called uniform regions. They are static in character.
3. The similarities among different areas have been brought about through different combinations of physical, biotic, and societal forces.
4. An area may be kept together through a pattern of circulation binding the area to a central place. This area is called a nodal region, held together by functional relationships. The nodal region is dynamic in character.
5. Uniform and nodal regions are often related to each other through gravitation to the same central place.

Figure 5

FUNDAMENTAL IDEAS OF GEOGRAPHY



Teaching Applications of Geography

The classroom applications of geography are now in preparation. Activities are being constructed to show the many ways in which the surface of the earth may be divided by geographers, depending upon the objectives of their inquiries. Units are also being constructed to show how the shape and size of the divisions of the earth's surface are influenced not only by natural forces but also by the state of science and technology. Deserts and cold lands, which in the past have been unproductive, may now become productive through scientific progress; for example, irrigation or the discovery of oil can make a desert productive, and the discovery of minerals in Alaska and the Antarctic can increase the usefulness of those frigid lands.

In defining and studying regions, geographers are concerned with physical, economic, sociological, anthropological, and political facts. The regions defined by physical, economic, sociological and anthropological factors seldom coincide with the boundaries of the political systems that men have set up to solve some of the most important social problems. The resulting dissimilarities between political and non-political regions have been the cause of many problems. For example, if a river basin or an ethnic group is bisected by a political boundary, serious political tensions may result. Such problems may be "solved" by war, by international agreements, or by other social mechanisms. The approach we are taking, as shown by this brief description, provides a partial synthesis of political science, economics, sociology, and anthropology with geography.

Conclusion

The development of the organic curriculum and its orchestration is not a crash program. It is a lifetime commitment. It is the job of the academic departments of universities to stimulate more social scientists to pay attention to the problem of structuring the knowledge of their own discipline. Such logical patterns of ideas will serve the social scientist as a map to identify new areas of research, and will serve the curriculum worker as a guide to build a cur-

riculum which can be adjusted to incorporate new ideas as the frontier of knowledge expands.



- 1 In G. W. Ford and Lawrence Pugno, *The Structure of Knowledge and the Curriculum* (Chicago: Rand McNally, 1964).
- 2 *The Ant and the Grasshopper; A Georgian Folk Tale*, translated from the Russian by Fainni Solasko (Moscow: Foreign Languages Publishing House, no date).

Round Table: Concepts, Processes and Values

CHAPTER 4

The Obsolescence of Particular Content

Taba: I have a philosophical question about the whole business of identifying concepts, in trying to relate what Professor Feigl has said to what Professor Senesh has said. First Professor Feigl said that all concepts and structures are related to some discipline, and that they are constructs. In that sense they are somewhat colored by the prejudices of the particular discipline, or of the particular enterprise. Then Professor Senesh brought up a much more generic question; he said that we are preparing children for a world of the twenty-first century, one that we don't even see yet. This means that economics and everything may be different than they are now. If we visualize society in the twenty-first century, we might be able to visualize one without war, and, as Buckminster Fuller describes it, a society where we can make more and more with less and less. That's his idea of the dynamics of technology. If that is so, what about the concept of scarcity as a central concept of economics? If we take these three ideas into account, don't we need to question what concepts we select and how we use them in this enterprise for which we are preparing, i.e., education?

Senn: One way to begin it would be to ask: Scarcity for whom? The capital resources required to utilize technology are so expensive that by the twenty-first century, if our present rate of population growth continues we know that Africa, Asia and South America won't have sufficient capital resources. One way to get at this is to ask, who is going to have scarcity? In any event, some aspects of the scarcity problem which require choices will not be made obsolete by Fuller's visions.

Taba: You forget Mr. Fuller's assumption that if we produce more and more with less and less, we may have a society of total affluence.

McNee: Another approach to this is to accept the basic premise of economists that there will always be a scarcity of something. It may not be the things that have been scarce for ten thousand years; something is going to be scarce, though. This affluence produces waste products which must be taken care of. The real scarcity of the twenty-first century may be fresh air, and other things that we have always thought of as free goods. I don't think I would be so quick to write off the idea that there will always be scarcity.

Taba: No, I am not writing it off. I was asking the question: When we formulate concepts, what are all the things we may need to take into account, if we assume that we are preparing children for something that we don't yet have? Is there not a greater dialectic needed than saying in economics that scarcity is central? We need to open up alternatives and this is the essence of my question. Scarcity was just an example.

Senesh: I agree with you; we should open up a lot of alternative ways for children to look at things. But economists at present would not consider Buckminster Fuller's idea very seriously. It seems to me that we will never resolve scarcity. If we resolve scarcity there wouldn't be economists, since there would be no need for them. As a matter of fact, at that point we wouldn't need an economic system to allocate resources. The allocation problem would cease to exist. When Galbraith talks about the affluent society, he doesn't mean that we have technologically licked the problem of scarcity.¹ He is bemoaning the affluence in the private area and the poverty in the public area. Allocation is a greater problem than the technological solution of scarcity.

Stevens: This doesn't seem to get to the question. We are not asking specifically about scarcity. We are talking about the selection and formation of particular concepts that we include in the curriculum now, but that may not be applicable in twenty-five, thirty, or fifty years.

Senesh: That is absolutely right; we must try to prepare for changes that cannot be predicted. Here is a little experience I have had, in handling the subject of cities in the third grade. In visits to metropolitan areas of underdeveloped countries I have

seen real metropolitan development. My whole attitude on the theory of urban development has changed considerably since I talked to urban developers in India and in Japan. This new type of urban theory deals with the relationship of urbanization to industrialization. In the past we have assumed that industrialization is ahead of urbanization, but now a new phenomenon has been created. People are pushed out of the farm and moved to the city as a last resort; they are not pulled into the city. I am now incorporating this new idea into my third grade unit. All I can say is that I agree with Professor Taba. We should try to anticipate the future by utilizing the cutting edge of knowledge, but I do not think that scarcity was the best example.

Content and Grade Level

Saylor: In your assumptions about teaching these concepts and ideas in the first grade, there is no question but that they can be taught in the first grade, but should they? You did not in any case justify including them in the first grade. Should first grade be devoted to linguistics or to the arts or to music? Perhaps these economic and social science concepts should be delayed until junior high, let us say.

Senesh: All I can say in my defense is that we teach social studies in grade one. I am not asking for a new subject, but to eliminate the Mickey Mouse and put in something good. I am not demanding more time. All I ask for is that the same time should be allocated but underpinning the children's experience with analysis.

Learning Analytical Processes

Hering: Professor Senesh mentioned that the crucial thing is to develop the analytical process, or respect for problem-solving. If we do this we have solved the problem you present. If new concepts are necessary, the needs will be recognized as they appear. If we have developed analytical faculties, we do, in fact, answer part of our problem.

Shaver: This is very interesting. If you take Schwab's definition of a discipline and are willing to think in terms of substantive and what he calls syntactical or methodological concepts,² and look at the current projects in social sciences, you find that most of them concentrate on the substantive concepts. If you look at the

chalk board on anthropology, you see that it is describing what the world is like or what we think it is like. The emphasis is not on the process through which the scientist arrives at the ideas and tests them. The emphasis is not really on the analytic but on the substantive. I think that a philosophical question, or a logical question, is raised about the relationship between statements of objectives and what actually emerges. It almost brings one back to the period in education when we assumed that children learn how to be as critical as historians by reading histories. I doubt that anyone learns to think like Schlesinger by reading *The Age of Roosevelt*. There seems to be an assumption that if we teach children the substantive concepts of a discipline they will learn to be analytical, and I would question whether this assumption is valid.

Hering: It depends on *how* they learn the substantive concepts, though.

Senesh: I would like to react to the question, What is analysis? There is beneath the chart published in my resource unit³ another that I have not published because I was afraid of frightening the teachers away. In this one I underpin the different significant theories which can explain the market phenomena. When it comes to government, I introduce welfare theory. I incorporate these theories in important model-building exercises in the resource unit. However, these charts are just one-dimensional, with other layers underneath, used in much the same way as Professor Feigl used different layers. The chart I presented to you may be at the descriptive level, but I have done that only for the purpose of communicating with first-grade teachers. When we come to the resource unit, I beg you to notice how deliberately I build on that descriptive chart, underpinning it with some analysis and model-building.

Content and Process

Sigel: I think that there are two problems before us. First, how we organize social science knowledge is arbitrary. Let's start with the assumption that we have an amorphous body of information. We are going to organize these pieces of information in ways that are meaningful to us for some reason. We have been trained traditionally to think in disciplines. We think in economic terms; we think in sociological terms; and so on. The organization of knowledge is important; but equally important is the fact that the

method of organization is arbitrary, and therefore that it can *change* and, conceivably, *improve*. By improvement, I mean change of a kind that will make it more relevant for solving problems.

Second, if we say that the state of knowledge is tentative, not only in sociology or social science but in all our stated knowledge, then the comment that was made about teaching children the way to approach a problem, as an active process of cognition, is extremely important. What we must do is find out how we attack a problem irrespective of its content. The question is how do we present to the child facts a, b, c, d, which are contradictory, or which are similar, and how do we teach children how to handle contradictions? How do we help them to coordinate multiple bits of information into some kind of a unit? This is what I think of as process. What we have to do is simultaneously grapple with content and procedure.

We have the same trouble the children have, because we cannot coordinate any better than they can. We were not trained to coordinate subjects. We were trained to take a course in Economics 101 and a course in Sociology 101. Those professors never talked to each other and we never could talk to each other about that examination we flunked. So we really have to reorganize our own ideas, and that is the core of our dilemma. Whether we'll resolve it in all of our lifetime is another question. I think we have to face up to what our problem really is. I get impatient with the preoccupation with substance, although I don't deny its value.

Shaver: I would like to expand on Professor Sigel's statement. It is not only necessary to help children learn how to handle conflicting evidence, but there are also operational and procedural concepts that you can teach them. If you are teaching something in history you should not just take two documents which are internally inconsistent and help them find the internal inconsistencies. If you do this with one or two documents, the next time they may not think to look for internal inconsistency. *You first help to develop the concept of internal inconsistency* which the historian brings to bear on all of his documents when he looks at them. You label the concepts specifically, and teach them, because the evidence is that students aren't going to learn them implicitly. If you can label the operational, procedural, or syntactical concepts and put them along with the substantive concepts, you have some guarantee that the children may learn them and be able to apply them later.

Attitudes and Values

Fenton: I would like to expand this analysis one step further by indicating dissatisfaction with concentration on content and analysis without specifying objectives in the area of attitudes and values. It seems to me that Professor Senesh is getting at attitudes and values. I wrote down a quotation from his talk, "gain respect for analysis." That's an attitude. I am also concerned about the concentration on material about our society, and our society alone, and its possible effect on the attitudes and values of children. Aren't they being conditioned to think there is something wrong with people from primitive societies because there is no division of labor there, and because they don't use some of the obvious techniques we have developed to change their society in ways that will make it work better? Aren't we really encouraging ethnocentrism if we concentrate almost exclusively on the study of our own society in the elementary years, so that we teach the students implicitly that a command society in economics, or a traditional society, is in some way "wrong"? I think that unless we get our attitudes and values defined behaviorally very early in the game, we may implicitly, if not explicitly, disregard them.

Berlak: I would like to pick up this point, dealing with ethical issues. When we say that we are going to teach children to solve problems, we must ask: What kind of problems? I suspect that many of the problems with which we may want to deal in school involve basic ethical conflicts that confront us in our society. In my opinion, if we are to teach students to handle basic ethical conflicts, for example equality versus freedom, we must teach them the intellectual skills for dealing with the value issues as well as with the empirical propositions. As I look at the recent curriculum development work in the social sciences, I observe the absence of careful definition of intellectual processes not only with respect to empirical propositions but also with respect to value issues. I think that there are canons of rigorous ethical discourse just as there are canons of rigorous empirical investigation. There is a lot of vague talk about "problem-solving," without any careful attention given to its meaning. Curriculum makers in the social studies must concern themselves with methods of careful analysis of ethical issues if they claim they are dealing with problem-solving.

Hering: Please forgive a personal example, since I have not been out of the classroom very long. In the context of what has been

said here about ethics, and what Professor Fenton said about ethnocentrism, there are people who state that the primary purpose of social studies is to open closed areas. The question that I would raise is: Why, ethically, are the areas closed? I am reminded of a problem with a slow learner class I once had, which made a comparison of the ethics of the Buddhist precepts and the Hebrew ideas of the Ten Commandments. These children, who were extremely poor readers and had a very difficult time grasping a lot of things, began to see, for example, that the Ten Commandments are expressed in a negative tone. The Buddhist precepts are expressed in a much more positive tone, and they began to question why this was the case. Why was one negative and the other positive? It seemed to me that two things were accomplished. One is that they learned a little bit about the fact that various people meet their needs in different ways. One of the needs that they face is that of behaving in order to get along with each other. More important than that, they learn through this process that you can inquire and discover how man satisfies some needs which aren't necessarily economic, although they could become that. By learning this they have learned process at a very elementary level.

I think it is important to get across the idea that what you learn is not as important as how you learn it. When new things confront you in the future, you've got to know how to go out and learn them yourself. I have seen an emphasis on *how* to learn work with extremely weak students and I don't see why we can't begin to orient ourselves more and more toward this approach.

Symmes: I'm going to assume that we have both behavioral and substantive outcomes. You can't have the analysis in a vacuum. I wonder, Professor Senesh, whether the content of what you teach about the structures of particular disciplines will apply as well to other cultures, which have non-market economic systems. It seems to me that your curriculum is not necessarily culture-bound, that it could be applicable to other cultures.

I am also wondering, in terms of learning theory, at what point the child understands this structure of the total system. Does he learn bits and fragments until he reaches a ninth grade or a senior course, when he learns the total structure? Certainly the teacher has to know this. Or, are you assuming that at the first grade level,

in each of these areas, the structure of each discipline would be taught?

Senesh: Not at all. I am not proposing that the teacher should teach the structure of knowledge of the various social science disciplines in the classroom. This structure is a pedagogical device which I recommend that teacher-training institutions engrave on the mental screen of the teachers. Suppose a child comes to the classroom and says, "My father broke my piggybank and took my savings. He said he would give my savings back when he gets a job." If a teacher possesses knowledge of the structure of economics, she will be able to make a meaningful intellectual experience from this story. The trouble with teacher training today is that the future teachers today are not exposed to the structure of knowledge. The introductory courses which are taught are bulky and unimaginative. After the teacher throws the student a 600-page text book, the student still does not see the structure of the discipline.

Coming back to the question posed to me: I recommend that the structure of knowledge should slowly evolve as the child moves from grade to grade. By the time the child gets to the ninth grade, he should be ready to investigate the question: What holds society together? Then the teacher can help the ninth grader discover how the analytical tools of the economists, political scientists, anthropologists, and sociologists can answer this question. As the teaching in the ninth grade proceeds, the structures of the various social science disciplines will take shape.

Fenton: I understand your point about analysis and structure, but I am not sure the same approach is sound with respect to values. If students get the notion that the way to organize society is through a market, and get this notion hammered in, year after year, then they might, in the long run, think that other systems are quite wrong in some ways—and that conclusion will later hinder your efforts to teach analysis.

Senesh: In fourth-grade geography and history and in all the other grades, I open up all types of allocating mechanisms. This is the place where we show how society has organized one area that is entirely different from others. In history, for instance, we look at the American economic and political system, starting with mercantilism and moving to our mixed system. This puts economic

systems in a dynamic context that can be read vertically through history as well as horizontally in geography.

I have a good answer to Professor Fenton's question. In the interaction between government and market, the children discover exactly the opposite of what he holds. They are *disappointed* in the market economy when they realize that, through public policy, we abridge decisions of the market economy right and left. The children come out with a pragmatic view of the American economic system. They learn that in the market economy there are always at least three-quarters of our 200 million people who don't like its decisions for some reason or another. It may be that they don't like them because they are apostles for general welfare or because they are apostles to maximize their profits. Many businessmen are half socialist: they individualize profits and socialize losses. The market is not a holy institution; we modify it all the time. We have done so throughout American history, beginning with Hamilton.

Summary Comments

Taba: I started with two assumptions, and in the first I may have been wrong. It is that this meeting and that the activities of the Consortium are for the purpose of questioning, reshaping, and supplementing ideas, not defending positions. Somehow we got into defending something.

The second assumption concerns learning: namely, that children's minds are shaped by the nature of the structure and concepts which they handle. Therefore, the way you put them together and the way you handle them are very important—not just whether they are substantively correct but what the concepts do to the minds of people as they go through the process.

I think this influence of the structure and concepts by which one has been trained is illustrated here in our own discussion. We have been faced with the triple dilemma (Professor Feigl will have to tell us whether there is such a thing, and whether dialectics can be applied to it!) of dealing with substantive content, process, and values. We have evaded the issue, even though it has been restated three times, because each of us is in his own cave and can't get out of it. We have dealt with illustrations, but not with the real problem of how these three important things should be related in education.

The future task of a Consortium of this kind is to create the kinds of minds that can break out of whatever the limitations of

those caves are. Let me add one more thing, namely, aren't alternatives and openness the most important thing, the chief qualities *whatever* we deal with substantively? I wish that Professor Feigl would comment on these matters.

Feigl: I think that Professor Taba has summarized the discussion very well.

I tried to propagate the philosophy of the open mind, of the critical approach, which is a golden mean between the dogmatic, on the something-more side, and extreme skeptics on the other side. Clearly a critical attitude is the sort of thing that is most conducive to fruitful results. The dogmatist, if he ever had his mind open, has swallowed something that he took for the truth and his mind is never open again. The extreme skeptic has his mind open on both ends, as it were, and everything flows through. So, clearly, a golden mean attitude is advisable, in regard to questions of fact or of knowledge as well as of personal evaluation. From my own philosophical point of view, I wish to make a logical distinction between questions of fact and questions of value. Both are of tremendous relevance to all educational problems. We all wish to stay clear of the stigma of indoctrination, both on the side of information and of evaluation. We try to educate our children to keep an open mind. But education must not be so fluid as to be unclear and lacking in substance. What can we do?

In the future, we may not only have vast political and economic changes, in addition to technological ones which are related to them, but also we will begin to tamper with human nature in biological engineering and eugenic planning. Here arise grave ethical questions, to which no one has a very definite answer, unless he is a dogmatist and tied to a particular system or creed. What will happen in the future when biological and psychological engineering takes place, when, heaven forbid, teaching will become brainwashing? I don't know.

In any case, what the philosopher can contribute is something very modest, namely, to look with an open mind at all these various alternatives and appraise the pros and cons as best as he can from our present framework of values. Here we are not even united because people have different fundamental commitments. I think one task of education is to help us all become clear about the commitments.

I am tremendously impressed with what Professor Senesh has pointed out, particularly because he thinks along the lines of the

unity of science. These old scholastic divisions of economics, sociology, anthropology, history and political science are closely interrelated, if you look at mankind in action. They are, at best, helpful divisions of labor, designed to create departmental divisions so that people know what department they belong to in the school or in the university. As soon as we can teach the children how these things are interconnected, schematic structures of this sort will be immensely helpful. To diagram political science as a systematic analysis of political life may now be too high a level of aspiration, but this could be enlarged to include the sociological, the psychological, the economic, and so on. The gestalt psychologists have shown that a very effective method of teaching and learning is to map out the territory first and then fill in the details.

I consider Professor Senesh's policy of education a successive, progressive enrichment of content built into experience. This much is psychologically clear. Nevertheless, the teacher should have this conceptual structure before him, and I think it will be very fruitful. Map out the country and then dip down, here and there. Illuminate this with substantive details. This seems to me a good pedagogic policy.



¹ John Kenneth Galbraith, *The Affluent Society* (Boston: Houghton Mifflin, 1958).

² The reference is to Joseph J. Schwab. See his "Structure of the Disciplines: Meanings and Significances," and "The Structure of the Natural Sciences," in G. W. Ford and Lawrence Pugno, *The Structure of Knowledge and the Curriculum* (Chicago: Rand McNally, 1964).

³ Lawrence Senesh, *Our Working World: Neighbors at Work; Resource Unit* (Chicago: Science Research Associates, 1964).

A Structure of History

CHAPTER 5

A wide diversity of opinion exists on the subject, "A Structure of History." One can hardly speak of *the* structure of history; indeed, many historians deny that their discipline has a structure. They point to the unique quality of each historical event and decry attempts to construct theories, develop models, or even make high-level generalizations. Even those historians who believe that history has a structure will quarrel about its nature. Some of the discussion stems from disagreements about what history is. This issue—the definition of history—provides a good starting place for my discussion.

Definition of History

Along with many other historians, I have accepted the definition given by R. G. Collingwood in *The Idea of History*.¹ He makes four points:

1. "History is a kind of research or inquiry." It consists of a form of thought organized around asking, and trying to answer, questions. The questions concern something the investigator does not know for certain—the cause of a war may serve as an example—and the answers must be discovered. Any article in the *American Historical Review* supports implicitly this definition of history.
2. The object of history as a discipline is to find out about the actions of people who have lived in the past. The teacher may use history for additional objectives—for example, to shape the attitudes of his students—but the professional his-

torian writing a monograph or a journal article usually stresses scholarly investigation about the past as his sole objective.

3. The historian proceeds by interpreting evidence. Evidence consists of any remains from the past—documents, buildings, paintings, recordings and so forth. The historian reads and looks and listens, noting the evidence that strikes him as germane to his inquiry and ordering it according to established rules. These two activities—noting what seems germane and ordering evidence in an argument—contain the key to the utility of structure in the historical discipline.
4. Finally, studying history is useful because it can encourage reflective thinking leading to human self-knowledge. A man should know what distinguishes himself from other men and he should know the nature of man as a species. A clue to what man is and to what each individual can become lies in what man has done. Hence history is a worthy study.

Notice that Collingwood rejects by omission some dictionary definitions of history which treat history as all the things which have happened in the past or as a record of past events. We know only a tiny fraction, some small proportion of one percent, of the historical events which have transpired. Moreover, no one scholar in a lifetime of effort could investigate all the extant data about even one major historical development like the American Revolution. He could only select data to note down from the sources he was able to consult. He cannot have an impartial record; he can only produce an interpretation determined by the criteria he established for the selection of evidence from his sources and by the rules he used to draw conclusions from this evidence. History is a kind of inquiry. A student who learns facts and generalizations about the past without becoming involved in the process of inquiry—and most students in American schools do exactly this—does not study history.

The Idea of Structure

Turning to structure, Joseph J. Schwab defines the structure of a discipline in part as “. . . the body of imposed conceptions which define the investigated subject matter of that discipline and control its inquiries.”² If we accept Schwab’s definition and wish to determine the structure of history, we must identify the imposed conceptions which control historical inquiry. In the past decade, social

studies specialists have identified three sets of imposed conceptions: generalizations, basic concepts, and analytical questions. Two of these schemes—generalizations and concepts—I do not find particularly fruitful. The third—analytical questions—lies at the heart of the historian's process of inquiry, where their utility is obvious. I will discuss these statements in more detail.

A number of workers, most notably Paul Hanna and his students, seem to have identified the structure of the social studies, including history, as a list of generalizations: "People migrate when they are hungry" or "Division of labor results in increased productivity."³ Hanna's list contains more than 3,000 generalizations drawn from representative volumes recommended by social scientists. Hanna has arranged these generalizations into nine categories which represent in his scheme the basic activities of mankind and constitute a rudimentary method of inquiry. I find the entire system shallow and of dubious utility. There are too many generalizations to learn—one-and-a-half every school day for twelve years. Moreover, some of the basic activities aren't basic. But the scheme's principal fault lies in its conception of the social sciences: they become primarily a body of known generalizations rather than a process of inquiry. They consist primarily of things to learn rather than ways of learning. Yet lists of generalizations are one legitimate way to think about structure because they do define the investigated subject matter and they do control its inquiries. They just don't do either task very well.

Lists of basic concepts—power or culture, for example—are more useful than generalizations, but they still leave something to be desired. They have two major advantages. In the first place, scholars who have been identifying concepts choose a limited number—say thirty-five—which a student might conceivably master in twelve years of study. Secondly, some of the lists, such as the one from Syracuse, contain concepts having to do with the process of inquiry. Moreover, a list of concepts chosen to include the major analytical categories from the social sciences implies an analytical scheme which can control inquiry. "If you want to know about the past," they say, "investigate culture, power, the allocation of resources, areal association and so forth." Such a theme guides the search for data. It helps to raise questions. It tells historians what to take notes about. It also provides an organizational scheme suggesting ways to present evidence.

But most historians are not comfortable with concepts. Despite the publication of Edward N. Saveth's *American History and the*

Social Sciences,⁴ an analysis of the uses of social science concepts in the interpretation of history, most historians still do not think naturally in terms of a conceptual apparatus. Lists of concepts evidently have not proved to be maximally useful to historians or they would be acknowledged more fully in the literature. Like generalizations, concepts make up a structure of history. Like generalizations, they are not the most useful structure.

Analytical Questions—The Heart of History

Historians control their inquiry primarily through the use of analytical questions: "Was there an event-making individual on the scene?" Notice that I did not say a list of questions. Each historian has his own list which has grown out of his life experience. The differences in lists help to account for different interpretations of the same events by two men conducting parallel investigations. Differentiated application of the rules of evidence account for the remainder of the differences.

Each historian approaches an investigation with questions to put to his data. His questions may have been derived from a variety of sources. An abstract social science model, such as supply and demand analysis, may have taught him to ask about the influence of a change in tastes on the demand for Ford automobiles during the 1920's when General Motors—unlike Ford—abandoned basic black. He may have learned from a course in sociology or political science to ask whether or not Joe McCarthy had ignored the folkways of the Senate, a proud and ancient club. Knowing that a large number of leaders of the assemblies during the early years of the French Revolution were petty bureaucrats may have prompted him to ask if leaders in the Russian Revolution were recruited from similar groups. An argument with a rebellious son at the dinner table may have caused him to reflect about child-rearing patterns in other societies and hence to ask some new questions of Franklin's *Autobiography*. Analytical questions come from everywhere, not just from lists of concepts.

The analytical questions which a historian asks exert substantial control over his inquiry. Marx asked questions about class difference which guided his pen as he took notes in the British Museum. Analytical questions guide the search for data, tell historians what notes to take. They help provide an organizational scheme for the presentation of evidence. They even determine the subjects of books and articles, each of which starts with a question growing

out of a scholar's frame of reference. They are a legitimate way to think of structure as Schwab defines the term. They are the heart of the process of inquiry. They are essential to the study of history as Collingwood defines it.

Implications for Social Studies

What does this definition of structure imply for the selection of content in social studies? It does not imply that our sole objective should be inquiry or that we should concentrate our attention exclusively on the process by which students can be taught to ask analytical questions and to develop questions of their own. Many curriculum projects have taken the question of objectives too lightly. We must begin to think more seriously about the different audiences in our schools—low IQ, disadvantaged, potential dropouts *vs.* high IQ, highly motivated, college-bound students—and the objectives most appropriate for each group.

But given different audiences with which to deal; given three clusters of objectives (namely, attitudes and values, skill in the use of a mode of inquiry, and knowledge of content); and given the known relationships between objectives, teaching strategies, materials, and patterns of deployment: what does structure, viewed as analytical questions, imply for the problem of scope and sequence? I suggest four implications.

First, since many analytical questions useful in historical investigation come from social science disciplines, the social sciences should be taught early in the school sequence. If this conclusion is sound, the attempt to develop social science courses as senior electives may be misguided. So may the attempts to save a chronological approach to the fifth and eighth grade history courses. Why teach history at all in the grades? Why not wait until children can handle chronology better and until they have learned analytical constructs?

Second, historians must try to develop minimal lists of useful analytical questions. Those lists should be drawn from the work of other social scientists. I could easily turn many of Hanna's generalizations or Price's concepts into Fenton's questions. Carl Gustavson has taken a crack at a list in his chapter on causation in *A Preface To History*.⁵ My own methods book also contains some key writings on this subject.⁶

As we develop these lists, we ought to organize them in such a way that students will recognize immediately their source in social

science concepts. We might begin by asking, "What analytical questions are most germane to the analysis of a concept like culture?" A historian who uses these questions may be examining the culture of France during the reign of Louis XIV. Analysis of a culture demands a whole set of questions. Other clusters of questions can easily be developed.

Third, we must experiment with the types of materials and teaching strategies which will best help students: (a) to learn some analytical questions; (b) to learn how to use analytical questions in the process of inquiry; and (c) to learn to generate analytical questions of their own. The Social Studies Curriculum Development Center at Carnegie Tech has been experimenting along these lines for almost three years. We have some crude notions of what ought to be done based on our own evaluations. Several other groups and a number of individual scholars are also working at the problem. It is not easy primarily because so many variables are involved at once—audience, objectives, teaching strategies, materials, previous courses in the sequence. Three of our conclusions may be of interest.

A comparative method seems to work well. In two one-semester ninth grade courses, for example, we compare the political and economic systems of a traditional society, the United States, and the Soviet Union. We build the same sets of analytical questions into our study of all three societies. This device obviously facilitates comparison because it requires students to seek data about the same issues. It also gives them an opportunity to use the analytical tools learned in their examination of a primitive culture for the analysis of two complex cultures. The questions they have learned are immediately useful. They are tried out in different contexts. Our students remember them and are able to use them in a history course during the sophomore year. Repeated practice seems to help, hardly a startling conclusion.

A variety of types of materials can be used to generate questions. We have used anthropologists' case studies, diaries, letters, articles from periodicals and many other types of data. In each instance we write an introduction and study questions which lead students to generalize and to become self-conscious about the process of inquiry. We find all of these materials far more useful for our purposes than traditional text accounts which give away all the answers, often to the wrong questions.

Finally, we have employed a wide range of teaching strategies to get at the use of analytical questions. In some cases, we have given

students questions to learn and then invited them to apply the questions to data. Here we operated near the expository end of the continuum. On the other hand, we have sometimes given students raw data and challenged them to develop analytical constructs which the data suggest. They end a discovery exercise of this sort with knowledge of the data as well as knowledge of questions and of the process of inquiry. Many strategies dotting the continuum between these extremes are also useful.

In closing, I wish to suggest a fourth implication of structure viewed as analytical questions. We need new evaluating instruments. Our Center has heard about or developed two. The first consists of taped classroom sessions of experimental and control groups taught for a few days by a guest teacher who tries to get at the attack strategy of students. Do they use analytical questions or don't they? How do they handle the process of inquiry? Having classes taped enables a number of listeners to analyze the responses and to form judgments.

Our other proposed evaluating device consists of paper-and-pencil tests which will present students with data and ask them to pose questions to it. What questions will they ask—ones they have learned or ones they generate spontaneously? Will the questions be germane to issues that historians see implicit in the data, or will they be fired shotgun fashion in the hopes of hitting something? Can students ask clusters of questions getting at different aspects of the same issue? Only when we have defined our objectives behaviorally and developed instruments to measure their attainment can we hope to learn whether analytical questions are the most useful notion of the structure of history.



¹ R. G. Collingwood, *The Idea of History* (New York: Oxford University Press, 1946).

² Joseph J. Schwab, "The Concept of the Structure of a Discipline," *The Educational Record*, July, 1962, 197-205.

³ For a summary of this scheme, see Paul R. Hanna and John R. Lee, "Generalizations from the Social Sciences," in John U. Michaelis, ed., *Social Studies in Elementary Schools* (Washington: National Committee for the Social Studies, 1962), 62-89.

⁴ Edward N. Saveth, *American History and the Social Sciences* (New York: Free Press, 1964).

⁵ Carl Gustavson, *A Preface to History* (New York: McGraw-Hill, 1955), 55-64.

⁶ Edwin Fenton, *Teaching The New Social Studies in Secondary Schools: An Inductive Approach* (New York: Holt, Rinehart and Winston, 1966).

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An Approach to Understanding the Current Structure of Geography

CHAPTER 6

The Geographer's Way—A Definition

My first assumption is that the principal objective of a geography course should be to communicate "the geographer's way." In short, I am a Brunerite. Saying this does not really help very much, because one then has to decide how to define what the geographer's way is.

I define geography as not what geographers do, but what they share. Despite individual differences, there are a number of things that they share, which can be called the geographer's subculture. With apologies to the anthropologists, I will call this subculture a tribe. Like a tribe, this profession has its rites of initiation, its heroes, its tradition, its sacred books, its common technology and language, and its division of labor.

What is the first thing that one should look for in the mores or behavior of this tribe? I think it is the key questions that geographers have been concerned with for many years. One of the reasons for stress on key questions is my assumption that one of the chief things that gets professional geographers into geography, or professionals into any discipline, is their concern with getting answers to interesting questions. It is the research problems posed by geographers that give to geography its direction and thrust.

Geographers, wishing to give the appearance of a coherent and united group to outsiders, commonly define their subject in ways that are very inclusive and inoffensive. The result is broad, static, and uninteresting definitions, which obscure both the diversity among geographers and the fact the major interests of geographers change from time to time. Occasionally, however, some intrepid

souls venture to pinpoint the current foci of research interests, which reveal the current trends in geographers' thinking. I am going to discuss two such recent efforts.

Five Major Research Traditions in Geography

Professor William Pattison, the first director of the High School Geography Project, drawing upon his experience in the project and with many geographers, described four major research traditions in geography.¹ A committee of the National Research Council, in a 1965 book titled *The Science of Geography*,² also addressed itself to the problem of identifying the key questions that geographers have been trying to answer. They, too, came out with a list of four major areas of inquiry, three of which were similar to Pattison's, and one quite different.

The important conclusions to be drawn from these two efforts are that the discipline of geography is quite pluralistic, and that it encompasses a cluster of research questions. I have combined the results of the two studies, giving a list of five research areas or traditions that will form the basis for the analysis of content and trends in geography that I shall discuss here.

1. Physical geography, or geography as earth science; the arrangement and functioning of "natural" things on the surface of the earth.
2. Cultural, or ecological, geography; the relationship between man and his environment.
3. Regional geography, or area studies; what a given place is like as a "totality." (Literally, such "total" study is impossible, but such studies strive to be as inclusive and comprehensive as possible).
4. Spatial geography, or location theory; the geometry of the earth's surface; why things are arranged as they are and why there are differences in densities, dispersions, and patterns.
5. Political geography; how the political system impresses itself on the landscape.

Recent Directions in Research

All five research traditions have existed from the time geography was first studied in ancient Greece. However, progress in each tradition has been uneven. At the turn of the century, physical geography attracted the most attention. Somewhat later, the question of man in relation to his environment preoccupied most geog-

raphers. In the 1930's and early 1940's, regional geography received the most attention. In the last ten or fifteen years, geometric or spatial geography has attracted the largest number of productive and articulate research workers. Political geography has been recognized as a significant research question by most twentieth century geographers, but has been actively developed by only a few research workers. Perhaps political geography will hold the spotlight in the 1970's. Who can say?

Parenthetically, the diversity of research interests raises a major problem in translating the geographer's way into a course. If we say that we want to reduce the lag between the actual research frontier and what goes on in the classroom, how do we decide which among these research questions shall be emphasized? If we are talking about the way of the past, the tradition of geography, then perhaps all five research traditions should receive emphasis in proportion to the research time each has received in the past century. If we say that we want to teach the way of the present, then a course should emphasize the research questions receiving the most emphasis at the present, hoping to bring students as close as possible to the research frontiers today. However, since each of these traditions has persisted for so many years, each must ask important questions and should not be slighted. This is a problem and I do not know the answer.

Unifying Elements

I have defined geography as what geographers share. Let me turn now to what geographers share in each of the various traditions, to that which unites the geographical sciences. Why has geography held together in a single discipline? Why have geographers continued to read the same journals, attend the same conventions, and so forth? Part of the answer is found in the fact that individual geographers have often worked on different research questions at various times in their careers. Another unifying bond is common research technology and method. Geographers using similar research tools can understand each other even if the research questions probed differ as much as those of physical geography and political geography. Common understanding of maps as research tools, and of modern areal statistical methods, tend to unify them.

Another unifier among geographers is their commonly held set of values. I think that most American geographers would agree that we share at least three key values. One of these shared values

is the humanistic or aesthetic appeal of maps. A second value that geographers share is the virtue of direct observation, which they usually label as field work. A third value shared by geographers is a yearning for that which is comprehensive, that which can be seen as a "totality."

The yearning for "totality" is the reason geographers have tended to push the area study approach; it is an important value that they are trying to get across. The ultimate geographic problem is to understand the entire globe as one single interacting system. Of all geographic values, this is the one that is clung to most tenaciously by geographers. "The globe is ours," they say, "and no one is going to take it away from us! No one else can interpret it as well as we do!"

Geography is further unified by its system of communication, which includes both visual and verbal symbols. Maps are a major means of communication, as are diagrams and mathematics. However, the major geographic communicative device is language, including geographic jargon. It is because geographers share many concepts that they are able to communicate, even though they may be working on differing research traditions. Four of the most important concepts are:

1. Scale, and shifts in scale.
2. Areal association.
3. Spatial interaction.
4. Regions and regionalizing.

These major concepts hold together the whole system of geographic thinking; they span the five research traditions, and provide an important key to the "geographer's way."

From Geographic Structure to Geographic Curriculum

The objective of a geography course should be to communicate the geographer's way, of which I have identified two major elements. One element is made up of the five great research traditions, which give direction and thrust to the work. The other is the group of forces which unify the separate research interests into a single discipline: a common technology, a common value system, a common conceptual system, and a system of communication.

How does one translate the geographer's way into the concrete reality of a course? Reflecting the current emphasis on teaching concepts and structures rather than collected facts, "The Settlement Theme Course Outline" for the High School Geography Project³ stresses the understanding of ideas.

The course emphasizes the geographer's mode of inquiry rather than his accumulated knowledge. To develop students' ability to use geographic techniques in the analysis of problems they will meet in the future, calls for awareness of the orderliness in the arrangements of phenomena over the surface of the earth, and awareness of the interconnectedness of people and things in different places. Throughout the course there is emphasis on problem-solving which reflects the major research problems. We have also tried to bring into the classroom the excitement found at the frontiers of research.

The titles, content, and major research emphases of the ten units of the "Settlement Theme Course" are shown in the table. All the

SETTLEMENT THEME COURSE OUTLINE

Unit	Title	Content	Major Research Emphases
1	Introduction	Relation of city to site; land use; city growth	
2	Urban Geography: Intracity Analysis	City size and functions; relations among cities	Spatial, Cultural
3	Urban Geography: Intercity Analysis	Statement of basic problems of geography	Spatial, Cultural
4	Manufacturing and Mining as Settlement-Forming Activities	Location of manufacturing; city size and growth	Spatial
5	Agriculture	Location of agriculture, and its relation to cities	Spatial, Cultural, Physical
6	Culture Change	Culture innovation and diffusion	Cultural
7	The Habitat	Relation between man, his culture, and the earth	Cultural, Physical
8	Fresh Water Resources	Water needs, supplies, and management	Physical, Cultural, Political
9	Political Units and Political Processes	Interaction of political and geographic features	Political, Regional
10	The Frontiers of Geography	Unsolved problems	

major research traditions are represented in the course, though with quite different emphases. Spatial geography, or location theory, has the most prominent role, reflecting the current strong interest of many geographers; it is present in all of the units, and dominates four of them. Cultural geography is dominant in Units 6 and 7, physical geography in Unit 8, and political geography in Unit 9. A special unit, in which the regional motif is dominant, may be inserted after Unit 6, either optionally or required (relegating Unit 8 to optional status); this is a unit on Japan, as a mixture of East and West.

Tools and Sequence

Since there is a strong emphasis on problem solving throughout, appropriate levels of research technology are introduced to help the student learn how to solve problems. There are simple statistical procedures, simple map work, and other tools from the geographer's kit. Students are given tasks which require that they observe things and relate their observations to various types of data about the things they have observed; for example, to census data.

Later in the course there is quite a bit of emphasis on the use of things that extend their ability to observe, such as air photos. Air photos are not direct observation, but they are about as close as one can get to direct observation, in a school situation, of large surface areas.

One unique aspect of our approach is that we start with the city, which is the most immediate part of the child's environment, and end eventually with the entire globe. We build from the city to systems of cities, using central place theory, which relates the village and hamlet to the city, and the city to metropolitan areas. We then move to the inhabited parts of the globe that are not highly urbanized—the non-Westernized or underdeveloped world—then to those parts of the world which are not inhabited, but cover a lot of the earth's surface. We finally end with the globe, which geographers feel must have a place in any geography course. In Unit 9, "Political Units and Political Processes," we stress problems of nation states inhabiting a single globe, as part of a single, interacting system.

Conclusion

The course is concept-centered. Concepts relevant to each unit were selected, but with a view to choosing concepts that are also common to a number of units. The final unit, not yet written, may summarize and integrate the conceptual structure, as well as pointing to the frontiers of research.

The inductive approach is used in the course whenever it is feasible. However, a healthy balance must be struck between the inductive and deductive, and time does not permit the inductive development of all concepts.

By and large, I am satisfied that the "Settlement Theme Course" reflects "the geographer's way."



¹ William Pattison, "The Four Traditions of Geography," paper presented at the opening session of the Annual Convention of the National Council for Geographic Education, Columbus, Ohio, November 29, 1963.

² *The Science of Geography*, Report of the *ad hoc* Committee on Geography, Earth Sciences Division, National Academy of Sciences—National Research Council, Publication 1277, Washington, 1965.

³ Several course outlines will be published by the High School Geography Project; the settlement theme course outline is being used to guide the development of the course now being produced by the project. Through feedback in the process of development, the final outline and course will differ in unpredictable ways from the outline described here.

Round Table: Competing Curriculum Objectives and Methods; Teacher Training

CHAPTER 7

Competition for a Place in the Curriculum

Taba: What does happen, or what should happen, to geography and history, which have traditionally taken up most of the time devoted to social studies, when economics, sociology and other social sciences begin asking for a place in the curriculum? Is it possible to make specialists out of all the children in all these subjects?

Fenton: I think that is the wrong question. We should not be concerned with what is going to happen to "poor old history!" The proper question is, What behaviors should we expect the child to exhibit at the end of his school career in the area of social studies? Then we define the behaviors, and the behaviors imply contents, materials, teaching strategies, and the rest. If each social scientist is prepared to fight to get his discipline into the curriculum, we will never get anywhere.

Taba: I agree.

McNee: Personally, I don't mind a fight, in the sense of competing in a free market. The people who make the decisions about curriculum content should be free to choose from among all the things the disciplines have to offer, and the people in the disciplines should be free to make the best case they can for their product. But I want to say that the kind of geography I want to sell to the schools is not in the curriculum now. Children should be exposed to the same kinds of problems that research workers are trying to solve, not to the insignificant questions that are now so common in geography as well as much of the rest of the curriculum.

Behavioral Objectives

Sigel: How does Professor Fenton's statement square with what he is doing? Why is he concerned with defining the structure of history, if behavioral outcomes are the main objective?

Fenton: I did not know about behavioral objectives when we started our project; I am still learning about them, and find them very useful. We hope to achieve three kinds of behavioral objectives: attitudes and values, inquiry skills, and some content objectives. There are a number of criteria by which one can select content; only one of these is the structure of the discipline, phrased as analytical questions. We are using this as part of the process of inquiry, of hypothesis formation. We also have other criteria for the selection of content. Some are selected to meet the needs and the interests of our particular audience, which consists of able high school students. We also select content because it is related to problems that are important in the modern world. In studying Africa, for example, we focus on the problem of *apartheid*; and in India, we focus on the problem of economic growth. We also select content as a result of our judgments about the minimum things that any educated American should know, such as the identity of Pericles and Machiavelli. We have to admit that such choices reflect our own value system.

Taba: When you have such a broad range of objectives, aren't you concerned about whether you are covering enough history?

Fenton: It does not bother me that we are not "covering" enough history. You and I both know that the notion of "coverage" is a silly one. We cannot cover one-hundredth of one percent of all that is known anyway. But I did say that there are certain minimum things that we *should* "cover." These come out of my own value system, and I am perfectly willing to make clear to everyone what my values are.

Hering: Among sociologists, a difference of opinion has been developing over two possible approaches to the construction of sociology curriculum materials. Some favor the development of a course in sociology; our project is committed primarily, at least for the present, to the development of "episodes" that can be integrated into government and history courses.

Professor Fenton said he does not see sense in a chronological study of history, and that the other social sciences should be studied

first before history. I agree with much of what has been said about improving the curriculum, but how are we going to create students who are experts in economics, in geography, and all the other social sciences as well as all the other subject matter outside the social sciences? How will the poor elementary teacher, let alone the secondary teacher, manage all this?

Morley: When we write instructional objectives, as we are constantly doing in the school systems, we have to specify the components we have been talking about here. First, we have to specify some package of materials, titled in some fashion and containing a certain content and conceptual structure. Second, we specify how students are to deal with the materials, in terms of some taxonomy of behavioral objectives, such as Bloom's. The problem is not one of neglecting content or process, because we have to specify both. The problem is that, when this is done, the teachers are locked into a pretty precise operation. A lot of our teachers don't want to be squeezed that much. They ask: Where is creativity? Where are values?

McNee: It isn't a matter of choosing between content and process. The geographers in our project think in terms of a conceptual structure. But the Educational Testing Service people who are working with us keep saying that we have to state our objectives in behavioral terms. One has to keep up a dialogue about the proper relationship between the two.

Taba: In talking about content versus behavior objectives, we are not taking a broad enough view of the whole educational process. Dr. Ralph Tyler, whom I would call the grandfather of behavioral objectives, listed four objectives of learning, in the Eight-Year Study, in the 1930's.¹ One is knowledge; Dr. Tyler said that the trouble with knowledge was that it was not conceptually structured, and we are dealing with that problem now. The second is the area of cognitive processes: thinking, inquiry, question-asking. The third is values and attitudes. The fourth is skills. When we have taken care of concepts, knowledge, ideas, and so on, we have only done one-fourth of the job. The rest of the job, which we have lumped under the "process" category, has to do with how the students learn and how the teachers teach, and unless that package is also worked out, three-quarters of the job is left undone. The knowledge package alone, no matter how it is put together, does not get these other things done.

Saylor: Yes, we must recognize different categories of objectives; they don't all fit under one heading. Some objectives can be properly stated as immediate behavioral outcomes; others as behavioral potentials—the knowledge and understanding needed for behavior later on.

Fenton: Among the behavioral objectives related to attitudes and values, I see three kinds. One kind is behavioral attitudes which underlie important social processes, such as teaching in the classroom. We must insist that children do not throw spitballs and stink bombs in the classroom. There are also procedural values; for example, that subjecting judgments to the test of evidence is a better way to proceed than accepting conclusions from authority. Then there are substantive values; for example, that democracy is better than communism. We have a right to teach behavioral values and to try to develop certain procedural values; but with regard to substantive values, all we have a right to do is to ask the students to examine them, to reflect on them.

Organizing the Disciplines for Teaching

Senesh: I would like to make a statement on the matter of crowding the curriculum with more and more disciplines. I am not asking more time, to teach many social sciences, than the time already being used today to teach under the flag of social studies. And I am not arguing for the teaching of economics as a discipline. I tried to make clear in my talk that I am not talking about a subject matter approach, but an orchestration of all the social sciences, showing their relationships to each other as a background for the development of teaching units. I am talking about problems and units in the curriculum, not disciplines; the disciplines are used as they are needed, usually with one or another discipline playing the chief role at one particular time.

In developing teaching methods for the new materials, it is very important that the teaching of skills and the teaching of subject matter be closely related—using problems, pictures, simulations, and games, to teach both skills and content. If a teacher tells me that she cannot teach social studies in the first grade until February, because children cannot read sentences until then, I have to ask, What kind of sentences are you teaching them? Don't they have

any content? What is the sense of teaching sentences if the sentences don't make sense?

The problem of training teachers is a very difficult one, but I have some suggestions. The first suggestion is *not* to add some more introductory courses in the social sciences, each with an 800-page introductory text. What is needed is cooperation among the disciplines, with the focus on solving social problems. I would be delighted to teach a course in cooperation with Professor Fenton and equally able and imaginative people from the other social sciences. I am sure we would never have any disagreement, or feel that one is pushing the other out. All I want is the opportunity to sneak in the economic analysis that is necessary to understand why farmers demanded cheap money, when Professor Fenton is talking about the farmers' demand for cheap money. When the gold rush is the subject, I don't want the children to connect it only with saloons in San Francisco; I want them to understand the economic causes and consequences of the gold rush.

When the problem of cooperation between the social sciences in teacher training is solved—and it should not be too great a problem to solve—we still have a very big problem. That problem is cooperation with the methods people. There is practically no relationship between the people in methodology and the people in subject matter. They work in adjoining buildings and never see each other. Nothing moves from one building to the other except the students, and after four years the students might well ask, "Are all these trips necessary?"

English: I agree with Professor Senesh, particularly regarding the teaching of a lot of different and unrelated courses in the various disciplines. I wonder if that is wise, either at the college or high school level. When courses are organized in independent compartments, knowledge for each course is learned, tested, and then forgotten. Some relationship and continuity between courses is needed, and this continuity may be best achieved by constantly developing and deepening knowledge of the great disciplines and their methods and concepts.

McNee: I think Professor Senesh has given the answer to the problem of unrelated disciplines and rote learning. If courses are taught by the inductive approach, the problem is solved.

The Problem-Solving Approach

Berlak: I am not convinced that the problem-solving approach is the answer to all our problems, or that it has any value at all. In the first place, we haven't defined what we mean by problem-solving, or what we mean by problem-solving as an educational objective. In the second place, we do not know that problem-solving ability carries over from one subject to another, that teaching problem-solving in geography will help students solve problems in history. I think each of the curriculum projects has the obligation of thinking through these two issues.

McNee: The reason I am so convinced about the necessity of teaching the inductive method is that it is essential to science, and we have a culture to which science gives the main thrust. Scientific method is the highest value in our society. There are other values too, but this is a world of science. In order to prepare the student for the kind of world in which he lives, we have to show him how science works and what the scientist does. Teaching students *what* scientists have learned doesn't do much good, because half of what anyone learns this year will be obsolete in ten to fifteen years. That is why I am so strong on problem-solving.

Sigel: But you solve different problems in different ways. A problem in aesthetics isn't solved the same way as a problem in geography or chemistry. We have to define what is meant by problem-solving, and to discover the specific operations required to solve problems; then we need particularly to reinforce the understanding and behavior that is general rather than specific to certain kinds of problems. Problem-solving is not the private domain of certain content areas.

Taba: I would like to follow up the question of what are the skills of problem-solving. There have been some sacred routines for problem-solving for twenty-five years, and the problem with all of them is that it is a mechanized process: there is a ritual, but no understanding of the process. The people who are talking about problem-solving have the obligation of defining the necessary skills and the methodology; and this knowledge must then go into teacher training.

Featherstone: I want to go back to Professor Fenton's comments about the place of concepts and generalizations in planning a

curriculum. I agree with him that they can be useful in the preliminary organization of course material. And I also agree with him that the real objective is to get the child to develop his own concepts and questions. The really successful course is one in which the student moves beyond the planner's design of the course. What I still do not understand, though, is how you relate behavioral objectives to materials. Could you give some specific examples?

Fenton: We want our students to know how political decisions are made in any sort of government. We gave our tenth-grade students some diaries written at the court of Louis XIV, to which each student could apply his own analytical scheme to explain the government of the time. There are some interesting things in the diaries. For example, one diary tells about a king who is stopped during a walk down the street by a courtier who asks for and gets a favor. This is an access question: How does one get access to a decision maker? There is a lot of information about who gets to be a decision maker. The king becomes one because he was sired properly. A lot of other people get to be decision makers in the same way. Still others are recruited from various areas in the society because they have particular sorts of backgrounds. The diaries give much fascinating information about the recruitment of political leaders and about access to political leaders. There are interesting side-lights about institutional arrangements: In what institutions should decisions be made? The application of analytical questions from political science to these data guides the students as they take notes. They notice some data, and ignore others, because of the analytical questions they bring to the reading.

Featherstone: I have a feeling that Miss Plessner and myself are doing exactly the same thing in the Colonial unit. It amounts to teaching children to use induction, analysis, evidence, and testimony, and to make inferences.

Fenton: We built these questions into the ninth-grade political science course, and then we challenged the students to use them in the tenth. What delights me is that they sometimes turn up with questions that didn't go into the ninth-grade course. They were able to generate analytical questions that they had not encountered in previous courses.

Taba: You are taking it from the angle of what questions are generated. Let's look at it from the angle of what skills are required: there are at least four. First is the ability to identify pertinent points in the diary; to know what to look for. Second is relating one point to another. Third is going beyond the material given in the diary to make inferences. That is very difficult; most of us stick closely to the data given. Finally there is verification of the universality of whatever inference is made. What are its limitations? These skills refer to the process of analysis, something different from question-asking.

Fenton: First we ask questions, then we make an analysis of the data available to answer the questions. That is, we hypothesize and then we validate, abandon, or alter the hypothesis.

Taba: Yes, those are the skills. My question is: Are these teachable things? And are they generic enough to apply to a political document, a diary, a chart, a map, or whatever?

Stake: I agree with Professor Fenton about the desirability of using behavioral objectives in curriculum construction. It is delightful to hear a historian talking like an educational psychologist. But I have recently run across an example to shake my faith, a little, in behavioral objectives. The AAAS Elementary Science Project, with behavioral scientists well represented on its board, has a curriculum which is oriented to the *processes* of scientific inquiry. Some scientists are starting to raise strong objections to this curriculum, saying that the *structure* of scientific ideas has been slighted by the emphasis on process. Could it be that that project was too attentive to behavioral objectives?

What I expected to find in this meeting has not come about. I expected most of the speakers and most of us in the audience to favor a conceptual, or structural, approach to curriculum development. But your conclusion seems to be that the processes are far more important to the curriculum than the content. Specific concepts and generalizations are being pushed down the priority list.

I have been enlightened by what might be the unique contribution of economics to the structure of the social studies curriculum, but I am in doubt as to what concepts should be forthcoming from history, geography, and anthropology. Of course, each of the social sciences has its methods of inquiry, but are these their prime contributions to school curricula? I hope this is not so.

Shaver: I agree with Professor Fenton's earlier comments that we need to be cautious about inculcation of values. But it is not always easy to draw the line between procedural and substantive values. In our society we have certain commitments as individuals and as teachers, perhaps including the obligation to inculcate values that go beyond the procedural ones. I would be very upset if a child in my class said, "People do not have a right to equal opportunity. It is a ridiculous notion." I would have the feeling that this child is out of touch with reality, that perhaps his home and his education had failed him.

Senesh: I would not be at all upset by the child who complains that people do not have a right to equal opportunity. This would be as exciting to me as a new epidemic is to a medical student. I would pick up the issue, asking "Does a problem exist with respect to equal or unequal opportunities?" I would bring out pictures—protests before a courthouse, for example. I would establish the existence of a problem, as the first step, by showing the symptoms of the problem. Next I would define the problem, that people want something that is not provided for in our system of institutions; and social problems are always of this nature—a disparity between desires of people and the social arrangements.

Next, I would look for all the relevant facts that I could find, from the sociologist, the anthropologist, the political scientist, the economist, and so on. I disagree with the people who deplore the fact that the facts of the sociologist are different from the facts of the economist, as though this means that the facts of one of them—or, more likely, both of them—are wrong. The problem of discrimination is an excellent example of a problem for which we can use the expertise of many disciplines, which calls for great skill rather than for deploring the different views taken by different disciplines.

After the scope of the problem had been established, I would ask what its causes are. From economics, I would sneak in the analytical tools of market theory and welfare theory, to explain the existence of unequal opportunities. I would ask the other social scientists to use their analytical tools to help explain the causes of the problem.

Finally, I would propose solutions to the problem. What can individuals do to solve it? What can be done cooperatively? What can be done through the government?

This is an excellent example, on which we can build an integrated social-science problem approach. I think I would even bribe children to bring in problems like this.

Teacher Training—Getting the Materials Into the Classroom

Fenton: I do not know how we will resolve the question of teacher training. It will not be through institutes such as the NDEA institutes last year. There were 3,200 teachers in history institutes and 1,400 in geography institutes. I don't know how the geography institutes were, but many of the history institutes were quite inadequate.

McNee: The geography institutes were still worse.

Fenton: The institutes did some good things for the teachers, and I don't underestimate that, but they are not going to have much effect on the behavior of the children. Most of the historians who ran the institutes assumed that they should concentrate almost exclusively on communicating the latest research results on a topic such as Jacksonian democracy to the teachers. Such knowledge will not be of much practical help to a teacher who has a class of disadvantaged eighth-grade children in a big city.

Hering: But Professor Senesh seems to feel that there are a lot of teachers who are all ready to use new ideas and new materials, who say, "Fine, just give me the materials; I want to teach economic concepts in the first grade."

Fenton: We need much more than materials, and I am sure Professor Senesh will agree with me. We need a convincing explanation of what we are doing, what our objectives are, in order to persuade the consumers in the free market, as Professor McNee puts it. We need to develop a variety of teaching strategies for our materials, and ways of supporting and elaborating our materials with methods books, films and other aids. And we need a major commitment of resources to pre-service and in-service training. For one thing, all the NDEA projects ought to get all of our materials; then the teachers should analyze the materials and report back to their colleagues on them. None of this is being done now. The government is putting money into many separate projects and activities, without getting the additional benefits that would come from cooperative relations among them. An organization like the Consortium is an enormous help on this problem.

Featherstone: I think it would be extremely useful if we would stop talking exclusively about general concepts and principals and would talk about specific classroom materials, as illustrations of concepts and principles, as Professor Senesh has just done. I have had trouble today because I can't see how the things we are discussing would actually work out in the classroom. Talking about theoretical curriculum development should always be done with reference to specific classroom materials. We could be clearer, for instance, about this whole business of behaviorally-stated goals. It would take us more time, but I think it is absolutely necessary.

Gibson: Some of our work at the Lincoln Filene Center, at Tufts University, is relevant to the comments that have just been made by Professor Senesh and Mr. Featherstone. We have a K-6 curriculum project in the area of racial and cultural diversity, dealing with the preparation of instructional materials that provide an alternative to the "lily-white" elementary social studies textbooks and readers that are still common. These materials have behavioral goals, and they are concerned with problem-solving. We know full well that instructional materials are not going to do the whole job in this sensitive area of racial and cultural diversity, and we are trying various strategies in the area of teacher education, which you might be interested in knowing about.

We produced twenty-eight 45-minute programs for teachers last summer, under Title IV of the Civil Rights Act, designed to go with curriculum projects that deal with the problems of racial and cultural diversity in the United States. We have done a number of films with McGraw-Hill that are designed for pre-service and in-service teacher education. I think video tape and films, accompanying the development of instructional materials in projects, can do a great deal to help the teacher cope with the ideas and materials that come out of the projects. Professor Fenton has produced some films about his project, which I think are very helpful to teachers. We have in the script stage at Educational Services Incorporated a film to introduce the "Subject to Citizen" theme of the junior high program.

In addition to producing materials to aid in teacher education, we have kept in close touch with state commissioners of education and superintendents of schools and classroom teachers in the nine Northeastern states that are close to our Center. Last fall, we invited a large group of teachers to participate in a two-day conference at which four directors of projects producing economics

education materials at different grade levels explained their projects and their materials.

I think that when we try to communicate as project directors or as social scientists, we should have many teachers involved. We should also follow up to see if the conference is helpful to them in revising their curricula and taking account of some of the new things that are going on. I do want to emphasize that in the area of teacher education, there are many possible ways in which project people can help to get these materials and ideas directly into the classroom.

Hering: The big problem I see is finding people who are able to integrate and implement these materials. Our projects must concern themselves with this problem.

I am very pessimistic, having been a teacher very recently. I don't think that many teachers are equipped to deal with these ideas yet. I don't think the materials we are producing are really getting to the heart of the problem of helping teachers, especially in the elementary grades. I don't think we have the personnel that is needed to get our materials to teachers in an effective way.

English: In my work with the Educational Research Council of Greater Cleveland, I have been tremendously impressed by the fact that a movement from the schools has been generated, demanding improvement of the curriculum. This certainly makes life a lot easier for someone who is trying to improve it. We have thirty-odd school districts, all of whose superintendents are right behind the effort to improve the teaching of the whole curriculum, and they have persuaded a good percentage of their teachers to be just as enthusiastic. Perhaps we could get similar local councils in other parts of the United States to work in close cooperation with the teachers. It might solve some of the problems we have discussed. I would add, too, that we have tried many types of experiments in in-service education; we have the kind of teachers' guides that Professor Senesh spoke about, and we are trying to help the teachers in every way possible. We have summer sessions, classroom visitations, and at present we have a TV-lecture series that goes on every two weeks, in which we have about 5,000 teachers listening to talks by experts. The talks are followed by question-and-answer periods in which the teachers try very hard to put the speakers on the spot. I think we have generated a good deal of enthusiasm. I believe, too, that this is the kind of local participation and enthusiasm that is essential for the changes for which we are hoping.

Shaver: One reason that curriculum projects have failed in the past to get into the schools is because of inadequate mechanisms for getting materials to people who would like to use them. There are several reasons for this failure. One is that some projects are reluctant to release their materials, or even information about their work, until everything is finished to perfection. Another is that school funds are inadequate for new materials. Another is that there are too few opportunities for teachers to look at and learn about new materials.

In Salt Lake City, nineteen elementary schools are using Professor Senesh's materials with culturally deprived children, financed under Title I of Public Law 89-10. That is one way that materials can be made available. Other ways are needed, and perhaps publishers, project people and school people could all play a more active role.

Symmes: In our Developmental Economic Education Project, at the Joint Council on Economic Education, we have a large network of affiliated local councils for teacher education. We try to do a great amount of in-service education and, at the same time, build curriculum materials. We are working for articulated programs—kindergarten through grade twelve.

One of the things that I have found satisfying in this conference, and what I have seen emerging in the economic education program, is the presence of teachers and college professors of economics who have an understanding of the structure of the discipline of economics and can communicate it. What we need to do now is to get a definition of the structure of each of the disciplines that can be communicated to the teachers. This task has not been done, and I see the Consortium as an organization that could do it.

The other thing needed is to design a new structure of social studies—to create a new discipline. Some people, Alfred Kuhn, for example, are attempting to do this.¹ What we need to communicate is the structure of the disciplines, and then teachers can start to teach, because students will have something to hook the bits and pieces onto.

Arbital: We have had a curriculum revision program going on for some time now. There is an entire district in New York, and schools in other districts, using the Senesh materials for grades one and two. We have also been using the Lincoln Filene material, the Educational Services Incorporated material, and the New York

State proposals, and our own. In response to a position paper last year on revision in grades K-12, we had 17,500 replies from teachers. Teachers from all levels responded, and they indicated what they liked and disliked about the present curriculum. I disagree with those who think the teachers are not ready for change—they are quite ready to try new methods and materials. They are dissatisfied with what they have been doing, and they want change. When they are given opportunities to experiment with new materials, they do quite well.

We are getting a lot of feedback from 130 schools using our own materials, which are rather loosely organized. In the feedback we expected people to say, "I like this." "I don't like this." "Throw this out." "Add this." This isn't what we are getting; we are getting materials that teachers themselves are developing in the classroom, as a response to our experimental curriculum. They are sending us lesson plans and asking that they be evaluated. We are finding that many of our teachers are active and creative and innovative at this moment.

Silverman: In a county that prizes reading and arithmetic in the elementary grades, I have found a devious method for getting new social studies into the curriculum. This is by choosing materials that are readable, and interesting to children, and that contain some of the bigger ideas that we wish to get across. I would submit to you people in the projects that you not only prepare good teachers' materials, but that you also get people started writing things that children will enjoy reading; and that you also educate your teachers along with the children. One reason that people in Miami were eager to get Professor Senesh's material is that it is usable by children.

Senesh: I would like to close with three points. First, I am sorry that we did not pick up the question of evaluation. I do hope that this subject can be discussed later; I think it is very important. I would like to know what the innovator's relationship is to the whole evaluation process. Second, I want to clarify something that was said about chronology. I think what was meant was that the usual approach to chronology should be revitalized so that historical sense develops for the children, so that when you say 1776, or any other date, more than one event comes to mind and the whole historical period opens up. The idea of time-sense should be used instead of the conventional one of chronology. Third, I firmly

believe that people who are teaching knowledge are not neglecting the behavioral objectives. We feel strongly that the basic emphasis on knowledge in our society helps make the individual a better participant and leads to appreciation of our political and economic system.



¹ For a summary of, and references to, the five-volume report of the Eight-Year Study, see James Hemming, *Teach Them How To Live* (London: Longmans, Green & Co., 2nd ed., 1957).

² See Alfred Kuhn, *The Study of Society: A Unified Approach* (Homewood, Illinois: Richard D. Irwin and the Dorsey Press, 1963).

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Concepts, Structure, and Learning

CHAPTER 8

Designing the Curriculum to Fit the Child

Discussion of a curriculum must raise the question: Where does the child fit in? How, in fact, can the fancy structural concepts of a discipline be related to this developing organism who is different in the twelfth grade from what he is in kindergarten—not only by virtue of having been exposed to a curriculum, but also through the influence of society outside the school?

A discussion about values cannot ignore the fact that the child comes to school not as a *tabula rasa* but as an individual who has a number of predispositions to respond to and select stimuli. To assume that the school has such significant effects on values, without taking into account the influence and possible conflict that can arise between home and school, seems presumptuous.

As a developmental psychologist, my point is that there are at least two major considerations in planning curricula. One is the developing nature of the child, both cognitive and affective. The other is that he does come to school from an environment which has already had tremendous impact on his way of thinking, reasoning, and feeling. Looking upon social science curricula in this way, there are at least five categories of outcomes or goals that must be kept in sight.

The Goals of the Curriculum

First, there are certain *behavioral* outcomes, which are actions and intentions. That is, it is reasonable to expect some changes in behavior as a result of input. Second, there should be a *knowledge* change. The rate and amount of this knowledge change will

always depend on the child's actual and potential attainment. Next, there are *values and beliefs* that should emerge, not necessarily through the teachers' explicit behavior but implicitly, because children use adults as models. The fourth goal concerns *motivation*. This must not be confused with behavior. The kinds of motivation which should be the outcome of a curriculum are interest, persistence, and concern.

Finally, a *problem-solving strategy* should evolve. The child must develop a way of knowing how to go about solving problems. Problems can be viewed as conflict-laden situations, and solutions must be rendered which lead to the resolution of problems. Solving problems in the social sciences is more difficult than in the physical sciences, since solutions are not so clear-cut, but are tentative, subject to change. This puts problem-solving in the social science disciplines in a place that is unique. One has to learn to tolerate ambiguity in the social sciences. A striking example might be that of taking children to see a city council in action. They might see continual disagreement, no solution to problems, and only tentative or partial completion of tasks. Five years from now they may still see similar wrangles over poverty, housing, etc. Yet the students need to acquire perspective here. So the strategy that children must learn is how to handle conflict situations, how to tolerate partial solutions, and what expectations to have. The curriculum must provide a strategy for dealing with such problems.

There may not be agreement with these goals. For me, a successful social science curriculum will provide the necessary knowledge upon which to make decisions, a set of problem skills to aid in attacking a problem, and the awareness that all solutions are true only until proved wrong. "Truths" can be held only temporarily. They are dated.

Shaping the Curriculum to the Needs of the Educational System

Regarding the context in which curriculum changes are taking place, what are the ingredients of this microcosm called education? Important variables are the teacher, the child, the social structure in which the teacher and child are interacting, and the atmosphere in the classroom. With regard to the *teacher*, her role as a member of a complex hierarchical society must be seen clearly. No matter how innovative she wants to be, and no matter how fancy the curriculum, her success is in part determined by the attitude of the administration. If she has a principal uncommitted to innovation,

she will likely not innovate. Alternatively, if the teacher isn't involved in curriculum development with real career enthusiasm, the fancy curriculum will still go unused. If the teacher is committed, it is reasonable to question such variables as competence in teaching, the strategy the teacher can employ in implementing any curriculum, and the flexibility shown in moving beyond the tight curriculum bonds.

In addition, there is the *school organization* to consider. Teachers have to function in this social structure and it may be pertinent to ask whether the curricula can really be used in the various kinds of school organizations. For example, if a non-graded school is involved, can the curriculum be applied? What about the relationship between grades in a graded school?—how much chance is there for continuity? How much autonomy does the teacher have in dealing with curriculum matters? What is the place of social science in the total program? Also, what teaching aids are to be used to elaborate the teaching: visual materials, laboratories, experiences, and trips? This still leaves the question of how these experiences fit into a total picture. Seen in this light, the selecting and structuring of information appears as another basic problem.

Lastly and crucial is *the child* himself. I shall discuss him as a cognitive being, using Piaget's ideas on cognitive development.¹ One basic assumption is that intellectual growth is sequential and irreversible. The child moves in a pattern of development from what one might call a sensory-motor, action-oriented point very early in life, to the point where he becomes a logical, thinking adult. The mental skills that the child acquires at one stage are not necessarily fixed at that stage forever. In other words, there is constant reorganization, and development of new skills. The best illustration of this is the way causality can be studied. I rub two objects together and create heat. Here is a kind of simple cause and effect relationship which can be discussed in grade one. In graduate school, philosophical texts on causality can be read, still dealing with the same problem which now is a complex set of issues. As the child acquires these kinds of skills he achieves a certain equilibrium, then acquires new information which requires reorganization of his cognitive structures, and goes on again. According to Piaget, there is a constant process of assimilation and accommodation, which in effect is the acquisition of new information and reorganization of one's posture toward problems and issues as a result of this new accomplishment.

The child is ready for certain things when he can perform the

prerequisite intellectual operations. For example, in the geography curriculum presented by Professor McNee: In order to handle the material the child has to understand multiple causality, probability, the concept of space and the concept of time. If this curriculum is due to begin in the tenth grade, then it is probably suitable. Similarly, in the history curriculum presented by Professor Fenton, it is necessary for the child to be able to look at the same event from different viewpoints, picking out salient features, either by observation or inference, and ending up with a set of integrated understandings of a complex historical event. Readiness, then, is a function of operations that the child is already able to perform, and he is ready provided he has acquired the prerequisite skills for new experiences.

Cognitive Acquisitions Necessary for Understanding the Social Sciences

A number of the cognitive acquisitions seem relevant to the social sciences. One is the *ability to think in terms of multiple causes*—to see how an event is determined by other specific events. For instance, if a king is beheaded, there are certain outcomes which are different from the outcomes of just putting him in jail or not doing anything. Here the child needs to be able to conceive a variety of types of causes. A second cognitive requirement is the *ability to think probabilistically*. Children, especially under the age of seven, tend to think in absolute terms about causation and the future; but to work in the social sciences it is necessary to be able to make probabilistic inferences.

The ability to classify and to group things in hierarchical structures or relational structures is another important cognitive acquisition. To do this the child has to be aware that every object, person, and event has multiple characteristics. This poses the problem: Do we classify on the basis of one, two, three or more criteria? From this decision emerges a sequence of hierarchies, depending on the child's ability to coordinate the properties. This is a very complex task, but classification can be taught if one is sensitive to its complexity. The ability does emerge without direct intervention, but it is the duty of interveners and educational planners to be aware of the possibility of including appropriate experiences to facilitate the child's acquisition of classification skills. In a number of studies, it has been possible to teach five-year-olds to classify objects in a multiple way, and to construct new groups by addition (e.g., forming a group in which the blocks

are red *or* round) and by multiplication (e.g., forming a group in which the blocks are red *and* round). These operations are similar to the set theory children are now studying in the "new math," experience which should have some influence on how they are able to deal with social science materials.

Last in this group is *the ability to understand conservation*, the principle that objects retain certain characteristics in spite of transformation in role, appearance, or space. Conservation is often illustrated by Piaget's experiment with two balls of clay identical in shape and quantity. One ball is transformed into a sausage or a pancake. The child is asked if each ball contains the same quantity even though the shape differs. There seems to be a definite stage when a child realizes the balls of clay are equal in quantity even through the shape differs. He conserves the essence in spite of transformation. The idea that an object maintains its identity in the face of transformation is a complex yet crucial concept.

Research shows that a child understands conservation only if he understands three principles. One is multiple classification, already discussed. Another requires the child to be aware of potential disparity between what he sees and what is in fact true. Children shift from being literal, bound by the observable, to the ability to make inferences. Two one-half pint containers may vary in shape, but still hold the same amount of liquid. To grasp this requires comprehending that what is perceived is not necessarily true; it is also necessary to understand that changes in one dimension can create changes in another, an application of the principle of compensation. The third ability required to understand conservation is what Piaget calls reversibility. The child must understand that the ball of clay, after being transformed into a pancake, can be molded into a ball again, with the original quantity of clay intact. Conservation is a relevant principle for social science; the fact that a person maintains an invariant role in the face of social transformations, for example, is relevant to political science.

Given the four cognitive acquisitions just described, the child is ready to start thinking in formal terms: to generalize and construct hypotheses on the basis of observations, to make deductions from hypotheses, and to test the deductions and modify hypotheses on the basis of further observations.

Implications for Curriculum Planners

I have not spelled out a full theory of curriculum development, and I do not think this can be done at the present time, when

only the most casual acquaintanceship exists between curriculum developers and child developmentalists. Nevertheless, my suggestions offer more than enough substance to keep curriculum workers busy for a while.

Confining these remarks on curriculum planning to the subject of classification, which may seem to many an unimportant matter that can be handled in a few days if it deserves a place at all, I shall suggest a sequential development, beginning with the simplest tasks and ending with thought processes that are rather complex.

1. Classify a group of objects into a few classes; for example, a group of blocks into round and angular; or into red, green, and blue; or into yellow, blue, and other.

2. Classify a group of objects into two groups, then subclassify each of the groups into two groups; for example, classify a group of foods into fruit and sandwiches, then subclassify the fruit into apples and oranges and the sandwiches into jelly and cheese.

3. Merge several groups of objects into larger groups on the basis of a new classification; for example, red, green, yellow, and plain blocks into dark-colored and light-colored groups; or robins, cardinals, cats, and dogs into winged and four-footed animals.

4. Classify a group of objects on the basis of two characteristics for each group; for example, a group of blocks into red-round, red-square, green-round and green-square.

5. Using the four groupings of item 4 above, form alternative (i.e., not simultaneous) groups that are red-or-round, red-or-square, green-or-round and green-or-square. These examples represent logical addition.

6. Again, using the four groupings of item 4 above, form alternative groupings that are red-and-round, red-and-square, green-and-round and green-and-square. These examples represent logical multiplication.

At each stage of the sequence suggested above, the application can be expanded in each of two dimensions. First, a larger number of categories can be used; this will enlarge the child's familiarity with and ability to handle the basic concepts. Second, and much more important, other types of objects or instances can be used; instead of blocks, food and animals, substitute personality characteristics (for example, happy, sad, irritable, demanding), group situations (harmonious, tense, unfamiliar), historical episodes (wars, revolutions, territorial expansion) and social problems (depressions, graft, juvenile delinquency). It is possible to construct an indefinite number of such illustrations because of the simple but crucial

fact that all objects or instances in any class have many attributes. It should be clear from these suggestions that a very broad range of important and difficult things can be manipulated within the framework of classification problems. Perhaps less clear is the fact that the applications suggested are leading toward an understanding of probability and causality in social phenomena.

Summary

The educational system should be directed toward the accomplishment of a number of interrelated goals—toward modifying and developing the child's behavior, knowledge, values, motivation, and problem-solving ability. Curriculum planners, teachers, and administrators must all be aware of certain characteristics of children and of child development if they are to be successful.

In planning an educational program for a particular child, beginning at a particular time, full account must be taken of the experiences he has had up to that time. He is not a *tabula rasa*, even at the age of five or four or three. But neither is the pace and sequence of his development fixed for all time, even at the age of eight or ten or twelve. Drawing on the theories of Piaget, it is argued that there is a certain necessary *sequence*, but not *timing*, of development.

In his early stages, the child is sensory-bound, action-oriented and literal-minded. His development into an adult capable of the inferential, hypothetical-deductive thinking required for analysis in the social sciences must follow a certain sequence. Specifically, he must learn to think in terms of multiple causes, to think probabilistically, to perform simple and multiple classification, and to understand conservation.



¹ These ideas are presented with more detail in Irving Sigel, "The Attainment of Concepts," in M. L. Hoffman and L. W. Hoffman, eds., *Review of Child Development Research*, (New York: Russell Sage Foundation, 1964), I.

Round Table: The Need for Criteria, Rationale and Perspective in CHAPTER 9 Curriculum Reform

Morrissett: We are now half-way through the conference, and it is time to take stock. How far have we moved toward our goals? Are there any important things we should be talking about that we have omitted? Are we wasting our time discussing the wrong things?

I have asked three participants to comment on these particular questions.

Senn: We can see where we are by referring to the conference goals. Happily, we have achieved some of them. "The exchange of ideas about approaches taken to social science content in the new curricula," given as the main purpose of the conference, has occurred most pleasantly.

There are, however, some doubts that much has been said that will contribute to the improvement of the social studies curriculum, another of our goals. We have had the benefit of several brilliant individual solutions to certain aspects of structure and content in the social studies curriculum. But precisely because they were individual, I am afraid they will not be useful for dealing with the real difficulties of social study content on a nationwide basis—even assuming educational pluralism. Two things are needed. One is a set of criteria for making educational choices from among the variety of approaches offered. The other is a way to translate the theories, generalizations, and insights we have heard into educational practice and reality. Just what improvements are to be made and how they are to come about remain important questions for us to discuss. Let me illustrate these points by way of a few comments.

It has been said that most of American education consists of teaching children answers to questions they didn't ask. Fenton and others suggest that we reform and teach children to ask questions they didn't ask before. Perhaps this is a step in the right direction, but answers are important too. Even if children learn to ask some of the right questions, they can't ask all of them. We have to teach some questions as well as answers, but which ones?

There has been little explicit discussion of models of curriculum reform. I am concerned about the implicit assumption that the appropriate models for implementing curriculum reform are the same in the social studies as in other major areas of curriculum reform—in the biological sciences, mathematics, and language arts, for example. I do not think that the model of curriculum reform that has worked in these other fields is applicable to the social studies. One reason for thinking this is that there are many more social studies teachers than there are mathematics, French, or biology teachers. Another reason is that social studies teachers are not as well trained in their own fields as are teachers in those other fields. The nationwide assumption that the mathematical, language, and science models of reform will apply for the social studies is not realistic.

I also urge you not to forget that children deserve a childhood. Even if Bruner is right in saying that any subject can be taught in some form at any grade level, all the specialists cannot be honored. When will we discuss the question of priorities, and just how much of a child's time should be spent in study at different ages?

There are two other conditions that will handicap improvement in the social studies, even if we can find reasonably workable ways to deal with structure, content, and method. Unless we pay much more attention to teacher training it will not matter much what we do to improve social studies in other fields. Not quite so pressing, but extraordinarily vexing, are the backward policies of the U. S. Office of Education. Although it has spent millions of dollars in the field of social studies, a sizable fraction of this amount must have been wasted by a difficult and obscure grant-making process that takes up far too much time of good men. But this is not all. An obscurely simple-minded policy about copyrights on work produced with grant funds, combined with a failure to enforce dissemination of results of grants, has resulted in both wasteful duplication of efforts and in reluctance of good men to work in the field.

Of course, I do not think that the conference can deal with all of these issues, but we should consider them as we think about what we are going to do next.

John Stuart Mill defined an art as the best arrangement for putting the truths of science into practice. I think education is an art in this sense. The social studies are overwhelmed with truths from social science. We have got to devote ourselves to finding the best arrangement of the truths that Senesh, McNee, Fenton, and others are giving us, in order to perfect the art of social studies education.

Berlak: The greatest need in a conference of this sort, and in our curriculum-making efforts in general, is for very clear statements of the rationale of the various curriculum positions. We need to know the assumptions, the philosophical underpinnings, the objectives, and the rationale of the plans for reaching these objectives, for each set of curriculum materials.

There has been a reaction against listings of objectives and goals, just as there has been a reaction against preoccupation with process. This reaction has occurred because the statements of objectives have been stereotyped, and not accompanied by a reasoned case for the priorities suggested by the list, if indeed any priorities are suggested.

There are three very good reasons why a clear statement of the total rationale of a curriculum is needed. The first is that clarity about goals is essential for the construction of good materials. The second is that a clear rationale is a great help in making evaluation instruments. The third is that the adoption decisions of schools can be sound only if those who make the decisions have good knowledge about the rationale of the curriculum materials.

We have had a long and fruitful history of discussion about the goals and priorities of education, going back at least to Plato. Plato had some clear ideas about the goals of education: the principal goal was to prepare leaders to rule. He specified the relevant content: for example, children who were destined to become leaders were to learn about the gods at an early age; however, they were not to use the method of inquiry in studying the gods until they had developed what we today would call national loyalty.

In the twentieth century, I have great respect for the statements of educational aims made by Charles Beard in the 1930's.¹ He attempted to develop a rationale for a social studies program. Beard established priorities, and suggested that the sources for his

decision were to be found in analyses of society, morals, the learner, and the disciplines. Although I disagree with his fundamental purpose of instruction in the social studies—"the creation of rich, many-sided personalities"—I feel that he made a significant contribution by asking the right questions. Today many curriculum developers would find Beard's work illuminating and useful in clarifying their rationales.

It is up to those of us who are developing curriculum materials to make very clear to potential users exactly what is in the curriculum packages we produce. If we do not do that, we put an impossible burden on the schools, requiring that they try to divine from our materials alone all of the basic assumptions, educational theory and hoped-for objectives that we have built into them. For the most part, they will lack the resources to perform this detective work; and if they are able to do it, it is wasteful, duplicative effort.

This is a plea for more abstract thought, more theoretical dialogue, about the basic assumptions, purposes and procedures of our curriculum efforts. What happens in the classroom is important, and the materials are important; but there is a danger of concentrating too much on these end products of curriculum efforts, at the expense of sound rationales for the difficult processes that must precede the construction and classroom use of curriculum materials.

Taba: In order to put the conference into a broader perspective, it is necessary to look at the whole breadth of the educational enterprise. In making all the various kinds of educational decisions, big and small, there are six kinds of considerations that must be taken into account. These are:

1. Content, which is the subject of this conference.
2. Objectives, which include, in addition to knowledge, patterns of thinking, of values and feelings, and of skills. These, too, have structures which have developmental sequences that must be followed.
3. Learning processes, which also have developmental sequences that must be recognized.
4. Types of learners: high or low ability, rich or poor cultural opportunities, rural or urban backgrounds, and so forth.
5. Teachers and their teaching strategies. Social science is particularly difficult for teachers to master and teach, because it is a federation of subjects rather than a single subject.

6. The school as an institution, which presents both opportunities and limitations that must be recognized in planning implementation and dissemination.

We should recognize the importance and complexity of all of these facets of the educational enterprise before we put too much of our energy into developing any one of them, such as the structure of content.

We have had a number of changes in educational emphasis in the past thirty years, in most cases going to extremes. The Eight-Year Study was a protest against stale methods of rote learning of subject matter, and pointed the way to better methods of learning content. Then there were protests that too little consideration was being given to the child and the learning process: content was practically abandoned, in favor of an emphasis on process, which accomplished little because too little was known about learning theory. Since Sputnik, people interested in content have come into the field, and have ignored the learning process.

There has been a curtain between the "educationists" and the content people. The educators have worked on content, constantly rediscovering what the content people already know; and the content people have investigated learning processes, oblivious to many things the educators already know. The two groups have not only ignored each other's knowledge; there has also been hostile criticism and rivalry.

As federal support for curriculum development has grown in the past few years, I have hoped that the "process" people and the "content" people would get together and strike a profitable and fruitful balance. If they do, I am sure that we can accomplish in eight years what is now done in twelve, without any pressure on the children.

The Social Science Education Consortium looks like the best effort I have seen so far to bring the content and process people together. It is in a strategic position to accomplish a task that has not yet been achieved in American education—that of bringing about a balance and an integration that has not yet existed between content and process. In this conference, most attention has gone to content. I would like to see other conferences that would as closely examine the learning process, the school as an institution, and each of the other facets of the educational enterprise.

Morrisett: Professor Senn has raised several questions about criteria for making educational choices, and Professor Berlak has

pointed to the need for clear statements of the rationales for various positions on curriculum reform. Professor Taba has discussed the need for closer relationships between the methods and concepts people, thus putting the conference in a broader perspective. Are there additional comments?

Content and the Learner

Saylor: I disagree with Professor Taba's analysis. I think that the primary emphasis today in the new curriculum projects is on the learner. We are using better judgment about what kind of content we ought to have for the learners we have. I think that the programs directed by Senesh and Fenton, as well as Project English and the PSSC Physics course, are giving much more consideration to the learner than he ever received in the traditional program with the old content. The new content considers the uses the learner will make of it, how he needs to use it, and for what purposes. But in the traditional programs, we were only concerned about mastery, not about the purposes for which mastery was sought. That constitutes for me concern for learners.

Fenton: I am afraid that I disagree. I have traveled around and talked with people in a number of projects. Many of them claim to be producing materials for all students. They are not thinking about the different abilities of students, or the social class from which they come, or of the sort of career the child is going to have. They are saying, however, that these students ought to know something about whatever body of content the curriculum developers have brought with them from a formal university setting. I am sure that they are concerned with learners, but the amount of time that is spent worrying about the differences among learners in most of the projects seems to be quite small as compared to the quantity of time devoted to putting particular content into the material.

Saylor: My comment was a comparative one, I mean as compared to the 1930's and the 1940's.

Payette: I heard a statement recently that highlighted my reaction to the comment. Someone mentioned that we are not only interested in giving the students the right to think in the classrooms, but also in giving them the right to feel. In my observations of where the new project materials are being used, I have not seen evidence of much concern about the nature of the interaction be-

tween teachers and students and among students themselves. The emphasis seems to be more on the learning of ideas. There is not much emphasis on the learner's behavior, feelings, and values.

Saylor: How much was there in the old American History course?

McNee: Some of the history of the High School Geography Project is relevant to this discussion. The first step in our project was to have a number of college people sit down and try to define what the important ideas of geography are. We did not go immediately then to making finished materials. The next step was an experimental one. We selected ten classroom teachers and ten college professors. Each professor was teamed with a teacher, and the teacher was encouraged to experiment with the ideas of geography. The participating schools were picked from a variety of situations with respect to income level, geographic location, and so forth. We accumulated a large file of experimental results that came directly from the classroom. This procedure was very enlightening and creative; it showed that there were many ideas that could be introduced with success in tenth grade, which most people had previously assumed could be dealt with only at the Ph.D. level. Success in introducing advanced concepts into the high school depended on having very clear ideas about what they were, and on finding ways of making the concepts exciting to the students.

From the start, our project has been very much concerned with what goes on in the classrooms, with working closely with teachers, and with the nature of the pupil.

Rueff: I have worked very closely with Professor Senesh and his program for over two years. We have been very much aware of the different types of children we have in our schools, and of the fact that we have slow learners, gifted, socially deprived, urban and rural children and so forth. The problems posed by such varying circumstances are met by providing a great variety of resources in the materials so that the teacher, who has to make the final decisions, has the materials available to meet a wide range of needs.

Curriculum Projects and the Classroom Teacher

Miller: We have talked about the problem of bringing "content" and "process" people together, and of integrating all of the facets of the educational enterprise described by Professor Taba. In this

discussion, I have had the feeling that the classroom teacher has been underestimated. The final integration of all the thinking about subject matter and objectives and learning processes and so on must take place in the classroom. It sounds as though the psychologists and social scientists and all the other experts here are going to get together to prepare materials to be sent to the schools. Then the teacher goes to her mailbox, finds the materials, and is informed about what she is going to do this year.

In our school system, we teachers are constantly involved in learning about learning processes, in looking at new curriculum developments, in assessing the needs of our own school, and in putting all these things together to improve the education of our children. I think more teachers should be involved in such processes. We should not have everybody throwing materials at us and saying, "This is what we have done for you; go teach it."

Searle: Professor Berlak was talking about the difficulties of determining objectives and priorities for our educational system. Even if the experts can agree on these matters, they may be overlooking the very important fact that they are not the people who make the decisions. They don't own the educational enterprise; they work for it.

Berlak: That is exactly why I have made such a strong plea for curriculum developers to clarify their assumptions and values and objectives—their whole rationale—so that teachers and those who make the curriculum decisions will have a better basis upon which to make their decisions.

Silverman: I have been thinking about the great benefits that many teachers would get from these discussions, and wondering how this kind of conference could be undertaken at the local level. I hope that in our county we can make some beginning on activities of this kind. I am sure we can use some guidelines from national projects, but we have to work out at the local level what we think our children ought to have.

Lerner: I see many kinds of school systems, and in most of them there are no opportunities to sit around and carry on the kind of inquiry discussion about curriculum theory and developments that we are having here. Many classroom teachers go home at three o'clock to their second job. Miss Miller and Miss Silverman are

talking about school systems that want to work with and are able to work with, the ideas we are talking about here; but these are not typical school systems. What we need very much is a system in which bold and imaginative curriculum materials are produced by outstanding people and in which teachers are also involved in a dialogue about the methods and ideas of the materials. I know that it sounds like a contradiction in terms, to first prepare materials and then to somehow get teachers involved with them; but that is a problem that somehow must be solved. Some of the new materials do present challenges and alternatives in which teachers can become involved, and the presentation of clear rationales for curriculum materials, for which Professor Berlak has been pleading, can help to get teachers intellectually stimulated and involved in selecting and using materials in a creative and flexible way.

Searle: I agree very much that it is important to get teachers involved in a stimulating intellectual process, if the new curriculum efforts are going to make creative changes. I think this is what Miss Miller and Miss Silverman meant when they said that somehow we have to find ways to give teachers the benefit of the great sums of money that have been spent on the new curriculum materials, while at the same time giving them the opportunity to make their own decisions and to meet the needs of their own classroom.



¹ Beard, C. A., *The Nature of the Social Sciences in Relation to Objectives of Instruction* (New York: C. Scribners' Sons, 1934) and *Conclusions and Recommendations of the Commission* (New York: C. Scribners' Sons, 1934).

CHAPTER 10

Anthropology in the High Schools: the Representation of a Discipline

Let me begin by admitting to a progressive inability to speak in general terms about the process of designing curriculum materials. I am too close to the confusing details. A few years ago I was more willing to make pronouncements, predictions, and recommendations. Now, the best service I can provide is an inside glimpse of one project operation as it attempts to represent—with some kind of integrity—one of the social sciences.

The process of representing a discipline is, for us, only partly an intellectual one. The intellectual component is intricately linked to other components—some “political,” some “ecological,” some happenstance. We are probably anomalous in this respect: I understand that some projects have elegantly comprehended the crucial ideas of a discipline and marched ahead with clear vision and sure touch to develop appropriate materials. I admire and envy such people; at the same time I wonder if they can really be that fortunate. In our case, we haven’t gone ahead with a perfectly clear sense of direction. Indeed, we have wandered and stumbled along the way.

Project Strategy

We are, as you know, developing materials for secondary schools. And because anthropology has no established niche in the conventional social studies (we cannot, like the biologists and mathematicians, take out an old course and put in a new one), the materials are in the form of units rather than whole courses. It seemed more possible to insinuate new units than to shoulder aside courses, particularly since some of the latter have become semi-sacred. We are,

I suppose, engaged in a kind of subversion—federally financed subversion, if you will!

To be properly sinister, of course, subversive activity must suggest that it is coldly logical, efficient, and effective. By those criteria, we are not very sinister. One expects, surely, to revise and refine experimental materials after classroom testing. But units frequently have required wholesale change or total replacement. And in retrospect, the process by which they are developed seems a cluttered, chancy business in which errors of judgment occur at least as frequently as wise plans, and in which accidents—some fortunate, others not—play an embarrassingly prominent role.

Forward and Back

Consider, for example, one of our first units, “The Emergence of Civilization.” The intent and hope was that the materials would make it possible for students to engage meaningfully in an intellectual task that is of continued interest to archeologists: to compare the six original instances where hunter-gatherer societies evolved into those large, complex, agriculturally-based societies that we identify as the first civilizations, looking for regularities in the processes of culture change that produced them.

This is an extraordinarily difficult problem, one that the specialists have by no means resolved. It requires the command of much information; more, in fact, than most archeologists have at hand. But there is also the problem of uneven evidence. Data for the early stages of the transition in several of the regions in question is very sparse indeed. In any event, the unit didn’t work as planned. This is not to say that it didn’t work. Teacher and student enthusiasm was high enough to blind us for a time to what had really happened.

What had happened was this. Teachers had wisely chosen not to recognize the main task posed by the material. Instead, they had focused on feasible, useful, and interesting elements in the unit. These latter were secondary to what we conceived as the central issue, but they had intellectual weight of their own and much intrinsic appeal. Some very profitable discussions ensued. The materials were clearly an improvement, intellectually, over the usual, merely descriptive treatment of early Egypt and Mesopotamia. For example, V. Gordon Childe’s criteria of civilization—concentration of capital wealth, monumental architecture, social stratification, etc.—were critically tested against data. The particu-

lar "styles" of the several civilizations, as reflected in their arts, were compared. This was heady stuff for high school freshman and sophomores.

Measured, then, in terms of general intellectual quality, in terms of teacher and student response, the unit was successful. Unfortunately, judged in stricter terms, in terms of an adequate representation of the work, findings, and ideas of modern anthropologists—and in terms of classroom feasibility—it was not. So an almost entirely new unit is under development; this will be tested in the fall of 1966 under a new title: "The Great Transformation."

Rediscovering Mesopotamia

Students using the new material will be asked not to compare six cultural transitions but to consider the details of one, that of Mesopotamia. The new unit will call for as much classroom time—five to six weeks—as the earlier version. Using evidence cards showing scale drawings of artifacts, students will puzzle over archeological assemblages from terminal hunting-gathering, incipient food-producing and full food-producing sites, tracing thereby the development of the so-called agricultural revolution. In some instances, students will have access to data and interpretations so fresh that they have not yet appeared in final site reports.

In preparation for the analysis of such data, students will ponder some case histories of culture change from more recent times, of more limited scope, with circumstances more fully described. The hope is that they will then be able to approach the archeological and textual evidence of the cultural transformation of early Mesopotamia with a technical language, with some categories of analysis, with some awareness of hypotheses that might bring a higher level of meaning to that evidence. Toward the end of the unit, students will read anthropologists like Leslie White and Robert Redfield, the former interested in the question of energy and cultural evolution, the latter in the characteristics and relationships of the new culture types—the peasant and urban societies—that make their first appearance in the Near East.

Our hope is that the new version of the material will "subvert" history courses in a constructive way. What happened in Mesopotamia happened elsewhere, too, with enormous implications for the subsequent history of the human species. Anthropologists have always been interested in the species, and in its general and specific evolution. The case of Mesopotamia—of the major cultural trans-

formation that occurred there in the millenia between the end of the Pleistocene and the complex, bureaucratized society of 3rd millennium Sumer—instructs us suggestively about stages in cultural evolution. The particulars of the specific case do not permit the derivation of laws, certainly. On the other hand, they are not there to be memorized; rather they are to be *used*, used to stimulate thought about the broad culture history of man. Not, please note, about Western man, but about man.

The Importance of Prehistory

The project has for several years been testing another experimental unit in prehistory, “The Study of Early Man.” Like the unit on Mesopotamia, it consists of a package of materials—readings, slides, casts, evidence cards. These are used to bring the student into an encounter with a useful sampling of data and to help him emerge from that encounter with heightened intellectual power, a more realistic insight into scientific enterprise, and substantive understandings about the whole career of man, including those two million years we are wont to dismiss so blithely as “pre” history.

Prehistory typically has received little attention in history programs, as if it had nothing to tell us. But if one is interested in *human* history rather than parochial history, then it has everything to tell us. We live today in the context of social forms absurdly new, viewed against the long Pleistocene career of our kind. With temperaments fashioned over hundreds of thousands of years to suit life in small isolated bands, we live now in the midst of huge populations, creating and simultaneously trying to solve the problems of a human wilderness.

Since those first walled cities of Sumer, we have witnessed the development and interaction of thousands of social systems, each seeking to create institutions that will somehow accommodate an essentially Paleolithic man in social groups of increasing size and burgeoning technical accomplishment. The synthesis has been difficult. Few if any societies beyond the food collecting stage have achieved the equilibrium which we think existed in Paleolithic societies. The problems of synthesis have been well documented. Since almost the beginnings of cities we have had writing, and in written records we have the story of the ramifying disequilibrium in human affairs triggered by the invention of agriculture. The last 5,000 years of proliferating change we call History, forgetting that

the story has an ironically long foreword and a context, and that without the context, without the perspective of cultural evolution, it lacks substantial meaning.

Enthusiasm and Learning

"The Emergence of Civilization" and "The Study of Early Man" taught us an important lesson: that enthusiasm on the part of students and teachers is not a sufficient guide to the soundness and success of a unit. Some enthusiasm is welcome, of course, and is intentionally generated. But the reasons for the enthusiasm must be examined, because there are many irrelevant or peripheral things that may evoke enthusiasm. The mode of presentation may be novel, or the content exotic. Material on primitive societies, for example, always has a dependable appeal.

We have heard students say in feedback sessions that, for the first time, they have had to "think about" things rather than only "learn about" them. We are delighted with enthusiasm of this kind. But in "The Emergence of Civilization" we discovered that students and teachers generated enthusiasm which, from our point of view, led them off in wrong directions. And the initial student enthusiasm for "The Study of Early Man" probably helped to obscure from our view a lack of intellectual coherence which is only now coming to light, as we work on the third draft of the unit.

The Role of Concepts and Structure

The project has some eight major units in varying stages of development. Some of these are single manuscripts, written by an individual anthropologist. Others, such as the units on prehistory, are complex packages involving in their preparation a number of anthropologists and other specialists. To my knowledge, work on these units has never begun with an identification of key concepts or with an attempt to spell out the "structure" of the discipline. We have not, I must say, been beneath starting with opportunity: someone wanted to write materials on a given topic. More frequently, units have been designed to represent important research and thinking in the sub-fields of modern anthropology. But this representation has not been mechanical. Fields that have considerable stature within the profession have been given minority handling on occasion; for example, the important field of language-

and-culture receives rather small attention in the unit on early man. We have had to make decisions like this, seeking above all to find organizations of content that would make a legitimate contribution to secondary school social studies.

So we begin, not with concepts, but with topics. But the observation and interpretation of data is so dependent on the analytic concepts of the discipline that the latter are an inevitable and crucial consideration in the planning of materials. One concept, of course, is so conspicuously anthropological that it deserves special discussion here. What did we do with the idea of culture?

Culture as a Concept

We did not do what many might have expected: we did not produce a separate unit on culture. To do so would have been perfectly in order. Anthropologists themselves consider culture as the nuclear idea of their discipline. It could be argued that the concept reflects in an interesting way the structure of the discipline. It is an all-embracing abstraction and thus mirrors the work of the anthropologist, who tends more than other social scientists to be concerned with the wholeness of given societies. It is an idea that encourages the search for regularities in human affairs, because it orients the observer to look for patterns, to see probabilities as characteristic qualities.

But we did not develop a unit on culture. Rather, the idea is treated in its many and different manifestations in *all* of the experimental materials. In "The Study of Early Man" we are primarily concerned with the feedback relationship between human biology and a developing technological capacity. It seems almost certain, for example, that an important feedback existed between erect posture and the capacity to make and use tools. Another feedback must have existed between a large brain which, in the face of pelvic limitations required much growth *after* birth, which meant childhood dependency for a long period, which meant new forms of social organization and sexual specialization, which meant . . . , etc. So human evolution is unique, in that culture played a crucial part in it. Culture, here, is seen as the distinctively human form of adaptation.

In "The Great Transformation," we are interested in a major instance of culture change for its own sake, and also in the general dynamics of that change. Students learn that cultures are integrated systems and that a given change ramifies throughout the

system. They learn, too, that there is such a thing as culture ecology—that cultures adapt to one another as well to natural environments.

The Culture Concept in Area Studies

Three area studies, on Latin America, the Middle East, and Africa are under development. The idea of culture receives a different emphasis in each. In the Latin America study, for example, we have the case of a complex culture transplanted to a new setting. Iberian culture retained much of its integrity in the New World, so much so that modern Latin American politicians complain of its traditional power to stultify change. Some of the themes of that culture are investigated; for example, the very pervasive patron-client relationship that shows itself even today in economics, religion, and political affairs.

In the unit on the Middle East, we are concerned with the problems of traditional cultures moving, sometimes under duress, toward modernization. In the African material, the emphasis is on tribal culture and on the impact of nationhood on such a culture. The case history of one group, the Nupe of Nigeria, serves as the basis of this study. So we are suggesting many roads to the idea of culture. This seems appropriate for a concept with so many facets.

What do students learn from such materials? We know this: they do not learn pat definitions. But students seem to acquire the ability to make operational definitions. I must admit that these are extraordinarily awkward definitions. We don't yet know how properly to assess this—whether it is useful to achieve awkward (but operational) rather than precise (but rote) definitions.

Pattern and Function as Concepts

The handling of the concept of culture is not a model for how other analytical concepts are treated in the various materials. One of our units, "Studying Societies," does explicitly attempt to teach two key ideas, that of pattern and that of function. The ideas are first employed by students in the analysis of a primitive group, the Kwakiutl. The way in which people settle themselves on the land, the way in which they order their society in terms of rank, the ideas they have about the good life and the good man are seen, in the Kwakiutl material, not to be random but to be patterned. There are configurations to be perceived. Also, there are functional relationships between aspects of human existence.

Rank in a society has something to do with where one lives, geographically, within a community. It has something to do with how one is expected to behave. And notions of the good life and the good man relate to specific social positions. So the concepts of pattern and function teach the observer to expect configuration and to expect relationships between configurations.

Students go from the Kwakiutl case to the study of fifth-century Athens. The hope is that students, having learned to use the concepts of pattern and function in analyzing both a primitive and a classical society, can then make meaningful and productive applications to any society.

Anthropology and the Teacher

There are at least three different views of what anthropology has to offer the schools: the views of the teacher, the views of the professional anthropologist, and the views of the curriculum project. What teachers want from anthropology is by no means congruent with what anthropologists wish or feel able to supply. Teachers have been readers of Linton, Benedict, Kroeber, Mead, and Kluchholm. They frequently respond to what they perceive as the "relativistic" aspect of anthropological writing. They are intrigued by the inventory of human variation that decades of ethnology have recorded. They respond sympathetically to the "accepting" quality of anthropology, its willingness to take other people on their own terms, to respect them as dignified and worthy. But anthropologists have theoretical interests, often of a severely specialized kind. Their careers depend on the pursuit of these specialized interests and they have little empathy for the teacher whose image of the field has been fed by popular literature.

Teachers hope that anthropology will help students to "understand" or "accept" other cultures. (They intend, of course, to be rather selective with respect to the other cultures which are to be "accepted".) But to the anthropologist, respect for other cultures is so axiomatic that he cannot imagine wasting time on it. The anthropologist wants to "understand," but in theoretical terms, and that is quite a different thing from what teachers want.

Anthropology and the Project

The project has not been able to accept entirely the teacher's outlook, but we have not always accepted the scholar's outlook either. Frontier work in the discipline is not always amenable to

useful translation. Ideas so simple that they are scorned by the bright young specialists are sometimes the best ideas to work with. A consultant may advise us that the most significant idea in modern work on Paleolithic tools is that of functional tool kits, clusters of tool types presumed to be related to particular economic activities. But we learned in testing "The Study of Early Man" that students find much greater fascination in another mystery that is no longer of major interest to anthropologists: How does one tell the artifact from a naturally chipped stone? There are ways to tell, and resolving this mystery for students probably teaches them much about the methods of science.

We have been selective in other instances, too. We have been taken to task by some anthropologists who feel that we have not properly demonstrated that anthropology is a generalizing science. But the generalizations now available seem very specialized and of a narrow interest. With apologies, we have chosen not to walk down this road.

We must, of course, adjust to the profession, particularly in an ecologic sense. Specialists and resources are in limited supply. Work proceeds on the basis of those that are available. There are "accidents" of availability; the right man for a particular piece of writing or consultation turns out, surprisingly, to be available, or . . . not available.

There are other dimensions to the ecology of the profession. There are only about one thousand American anthropologists. A number of these are out of the country on field work at one time or another during the year. If not away, they are busy in their teaching and research. Relatively few are particularly interested in the problems of the schools. Since there is no tradition of anthropology in pre-collegiate education, there previously has been little reason for involvement.

The Project and the Schools

We are, thus, limited by the resources of the profession; and we are only selectively responsive to its demands. We are also, in our intermediary role, selectively responsive to the schools. We have tended to ignore their appeal for a course in anthropology (which we are confident would be relegated to an elective position in the program) and we have done little to satisfy directly those who yearn to love their international neighbors. But we have been sensitive to school people who say, "Bring us something vital,

something of relevance, something which will help make sense out of this crazy, mixed-up world." Toward that end a substantial part of "The Great Transformation" unit will concern itself, perhaps surprisingly, with peasant societies. Such societies have their origins in the period treated by the unit and they are of tremendous importance today, as new political and economic forms are worked out around them. The problems of developing nations are closely related to the characteristic qualities of peasant societies.

Conclusion

We are learning. We know now that curriculum materials, if they are open-ended at all, are a kind of projective instrument; teachers confer special and particular meanings on them. But we know, too, that those same materials can provide an educational experience for teachers, leading or at least pointing the way to a level of scholarly autonomy that too few teachers enjoy.

We have made mistakes and will continue, stubbornly, to do so. Between purely random behavior and precisely efficient behavior are several levels where hunches, accidents, and foolish enthusiasms play a part. Some enterprises turn out well; others don't. But mistakes are a part of the "discovery process" of project people. Naiveté is gradually replaced by some measure of sophistication. Slowly a clearer sense of direction emerges. So, too, does the capacity to achieve purposes.



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Political Science as a Structure for a Social Science Curriculum

CHAPTER 11

Aims of the Curriculum

E.S.I. is preparing a social studies curriculum for junior high school. Although three courses are planned, roughly approximating seventh, eighth and ninth grades, this discussion is limited to portions of an eighth grade course. The purpose of this presentation is quite narrow and specific: to give as concrete an idea as possible of how this material works in classrooms. Rationalizations and concepts are important, but any discussion of them should not be divorced from actual classroom material. The hope is that this demonstration will bring about consideration of all curriculum ideas in their classroom context—as scenarios for enactments between the child and the material.

The aim of the E.S.I. junior high school course is to understand the development in America of a distinctive political culture. By political culture we mean politics in the broadest possible sense, a seamless web which includes religion, economics, and social and intellectual change, and which must be studied through a wide variety of disciplines.

The units of the course are thematic, and each is a variation of the theme of the emerging political culture. While the themes are determined, the child's general interpretations of their meanings are not. It is important to stress that, beyond a point of factual and thematic comprehension, this material is open-ended. In a sense, the evolution of a political culture is the evolution of a national character. Each child, as he elicits history from the materials of this course, will have to develop his own assessment of the American character. He will have to do this in a disciplined way: he will

have to square his interpretation with the rules of induction, logic, historical evidence, and common sense. Fortunately, it is quite impossible to separate the child's concern with the political culture of this course from his own concerns as an American today.

The curriculum materials and exercises are selected with the purpose of getting the children involved in, and excited about, the process of making generalizations from the interesting data of political history. The emphasis is more on developing the students' intellectual abilities than on retention and recall. The materials are presented in ways which give children opportunities to discover regularities and uniformities in the social world around them, and to recognize causality. The development of these skills should enable them to categorize other social phenomena, in other places, at other times.

So far the E.S.I. curriculum is a "roughly coherent but highly flexible framework within which we can construct model materials."¹ The use of the two major concepts, power and political culture, has been defended on the ground that adolescence is a critical period in the stabilization of an American child's political development. Evidence also suggests that school is the most important formal agency of political socialization.²

A Clearer Look at Course Two—"From Subject to Citizen"

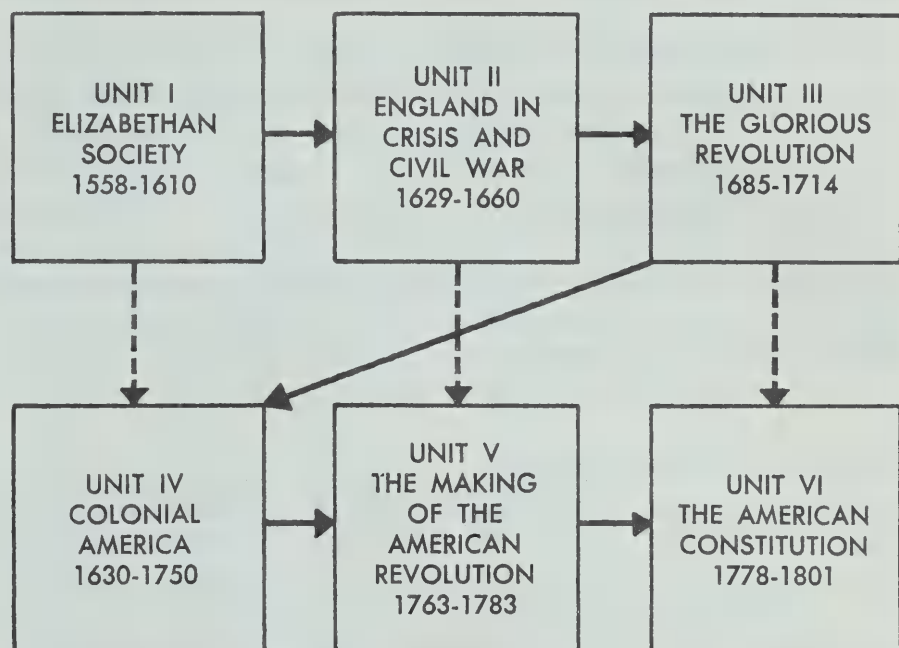
The pivotal course in the three-year sequence has as its theme, "From Subject To Citizen," and is intended for use in the eighth grade or thereabouts. The course draws its material from seventeenth and eighteenth century British and American experience. Its limits in historical time are the reign of Elizabeth I on one hand and the accession of Jefferson to the American presidency on the other—roughly from 1588 to 1801. It is not a narrative account of what happened; rather, it is a series of six studies in depth, or units, dealing with major developments and critical episodes in the emergence of a changed political culture in the two centuries.

The organization of units in "From Subject to Citizen" is reflected in the following diagram. Units, if taught in full, may vary from six to eight weeks in length.

We eschew the fetish of coverage and the obsession with isolated facts. The units present studies in depth. The material is as authentic as possible and is presented in a thematic way, to provide room for "guided discovery." The course is focused on people, with

the feeling that this is probably a much better way of learning citizenship than learning generalizations by rote from a teacher.

Unit Sequence in *From Subject to Citizen*



Generalizations and the ability to generalize figure importantly in this course, but they are not an end in themselves. The actual generalizations are not as important as the process of generalizing the child learns to apply within the framework of the themes. In this sense, the goals of this course might be stated behaviorally. That we have not done so is in part because we are reluctant to separate goals from the actual classroom curriculum material; and because we feel our themes are, on their own merits, vital for American children today.

The Colonial Unit—"The Emergence of the American"

Unit IV, the Colonial Unit or "The Emergence of the American," which is the most advanced in preparation and testing, was chosen for this discussion. A provisional version of this unit, probably best used in the eighth grade, has been published, and we both have had experience in teaching it. During the summer of 1965, we trained teachers to use the course, and it is now being tried in selected states.

One word about the materials of this unit. They are printed in pamphlets, to give the teacher more flexibility in presenting them. Each pamphlet contains copies of maps, documents, charts and photographs, together with outlines of discussions and student guides. It is intended that they be dispensable student-owned materials.

The Colonial Unit takes its theme from a question asked by a French observer of the colonial American scene, Hector St. John de Crevecoeur. He asked, "What, then, is the American, this new man?" and suggested how he thought the American differed from his European counterpart. His question provides the thematic structure of the Colonial Unit. It is not raised immediately with the children who study this material. Rather it is used as a way to organize some notions of the American national character after students have encountered evidence of how Europeans might be changed by their contact with the New World.

Geography and the American

In the Colonial Unit, the first piece of evidence the child is given is a 1719 map with parts of the world incomplete. The mapmaker indicates that the continent we now know as America might be the ancient island of Atlantis. To some Englishmen, this might have spelled Utopia. An English playwright contrasted England and America thus: "I can tell thee for as much red copper as I can bring up, I have thrice the weight in gold. . . . All the chains with which they chain up their streets are massy gold and all the prisoners they take are fettered in gold, and for rubies and diamonds, they go forth on holidays to gather them by the seashore to hang on their children's coats and stick in their caps." To balance this view, the children have materials from Richard Hakluyt, John White and the Virginia Company. Hakluyt, for instance, wanted Queen Elizabeth to establish American colonies to open a new woolen market. John White, with his *Planters Plea*, persuaded thousands to emigrate, for the enlargement of Christ's kingdom, while the Virginia Company called for blacksmiths, carpenters and practical people who could really make the enterprise work. The children sift these materials to find their own answers to questions such as "Why did people come to the new world?" "Why might people have wanted to leave England?" "What motivated Englishmen to establish colonies here?"

The question then asked is, "If you were going to establish a colony in America, what other information would you like to have?"

The general response to this is, "information from someone who has been there." To supply this requirement, there are copies of John Smith's description of Virginia from his *History of the World* and his description (with Frances Higginson) of New England. This is where geography comes into its own, for these descriptions show vividly the interest and usefulness of geography. The children must identify the pictures and decide which is of Virginia and which of New England. They also draw a map of Virginia based on John Smith's description.

Next, they are asked to consider, "Where would be the best place on the Atlantic seaboard to place a colony?" "How will Englishmen respond to the climate?" "What use will they make of resources?" "How can a colony be organized?" "How will the land be divided?" Finally, they use the material they have been evaluating to plan their own colony, showing how the land is going to be used and indicating lines of communication.

Community Studies and American Character

Part II of the Colonial Unit is a case study of the settlement of a New England town, Sudbury. It suggests a definition of the American character, by contrast with the ways of the Old World. It fits into the theme of "From Subject to Citizen" in a specific way because the settlers of the town tried to reproduce an English medieval village, and their failure suggests the outlines of the emerging American character. Discovering why the attempt was unsuccessful also gives the children more insight into problems of social class, class conflict and cultural change.

First, it is necessary to show the main features of the medieval economy, and its related social structure. This is done with maps, charts, documents, and occasionally some narration. Then the Sudbury story continues by tracing in detail the life of Peter Noyes. Records of the time are used to follow his journey from Wayhill in England to Watertown, Massachusetts, until he finally settled in Sudbury. Noyes was one of the petitioners entrusted by the Massachusetts General Court to distribute the land grant to Sudbury. This was attempted on the open field system and an interesting ranking of the settlers occurred. The children discuss the basis of the ranking and try to find reasons why, for instance, the miller should rank third when the land was shared, and the minister first.

An interesting anecdote provided the basis for further sociological discussion. It tells how a master who had been forced to sell his

cattle to pay his servant considers dismissing him. The servant is impertinent enough to suggest that he give him his cattle in payment. The master then poses the question of what will happen when all the cattle are gone, to which the servant swiftly replies, "You then shall serve me, so that you can have your cattle back again."

Similar problems surround a discussion of George Washington. An attempt is made to break down the myths that surround him, first by viewing Washington as a planter in the South. His problems as a planter, and many of the cultural differences of the South, are brought out. The children are presented with the anomaly of his attitude toward slavery. He wanted his own slaves to be treated well, and yet wrote to friends in Philadelphia saying he didn't think runaway slaves should be able to find sanctuary with the Quakers. The children learn that Washington planned to free his slaves at his death, and someone is certain to raise the question, "Why not before?"

A similar complexity in social organization is illustrated by the autobiography of Gustavus Vassa, a Negro whose life began in a slave-owning family in Africa. After being brought to America as a slave, he managed to escape to England, and wrote on the abolition of slavery, all the while accepting complacently that his father owned slaves in Africa. Here are some real enigmas for the children to fathom.

Economics and the New Man

As another example of how the E.S.I. curriculum ties in with other social science disciplines, we will look briefly at the game "Empire." The game is set in the late 1730's. The school class is divided into six different teams—the New England Merchants, the Colonial Farmers, the Southern Planters, the Virginia Planters, the London Merchants and the European Merchants. A large map is the gameboard and each team has ships and boxes of cargo representative of its geographical area. The goal of the game is to increase wealth while keeping within the trading rules of the Empire. The economic problems involved are many, for no manufactured goods can come from European merchants and the colonies cannot sell to Europe except through London. There are other contingencies, too, such as interference by customs officials, pirates, and storms at sea, to further complicate the trading. But there may also be good sailing. The purpose of the game is to help the

children learn about the mercantilist theory followed by the English at this time, and understand what it meant to American colonists.

Politics and the New Man

The concluding piece of this unit, "Why did the Colonial Assemblies come to clash with Royal Governors?" focuses on how the American is emerging as a political animal different from his English forebears. When students see the attitude which Americans take toward Royal governors they must try to answer the question, "Why?" What gives the American such strong feelings that government should be run by and for himself? Here students can go back to the pattern seen in Sudbury and in the Virginia settlements—the pattern of Americans setting up towns, deciding how land was to be used, and how much each settler was to receive—and consider whether it was contempt for governmental authority or familiarity bred by long interference in their own affairs that led Americans to clash with royal authority.

Conclusion

As yet, the full E.S.I. curriculum for social studies has hardly passed the embryo stage, though many units are nearing completion. Experiments are being tried to find materials and methods which best suit the curriculum's purposes. It is hoped that education will be encouraged by this attempt to raise the level of political socialization in America, while improving the standard of history teaching in the schools.



¹ Franklin K. Patterson, *Man and Politics*, Occasional Paper No. 4 in The Social Studies Curriculum Program (Cambridge, Mass.: Educational Services Incorporated, 1965), p. 58. This booklet gives the background, rationale and description of the program on which Miss Plessner and Mr. Featherstone based their presentation.

² *Ibid.*, pp. 16-17.

Round Table: Inquiry

and

CHAPTER 12 Evaluation

Senesh: I think the project developed by Educational Services Incorporated is truly very exciting, for two reasons. First, I find an answer to a very important problem history teachers are facing in the elementary and secondary schools, and even in college: How do you develop a certain historical sense? How do you get a three-dimensional picture of a period? At present, children learn historical data for a test and then forget it. Historical dimensions just don't exist, either in the elementary schools or in the college except, occasionally, through historical novels. I think the rationale, wanting to make the child experience the way a historian works, is not important. What is important and exciting is that the period studied suddenly becomes more than dry data and events. I wish we could have testing and evaluation methods that would measure occurrences like that.

Second, it is one of the finest examples I have seen in which history is used as a container for the other social science disciplines. The curriculum gives a very good place to economics and political science and sociology; those disciplines add much to the historical presentation. (I do not want to annoy the historians by suggesting that history is nothing but a summation of the individual social sciences. There is more to history than that, I am convinced, though I don't know what that something more is.)

Inquiry

Marker: I get the impression that you people at E.S.I. have in mind clear answers to many questions that students ask, such as, "Why was the minister in Sudbury ranked first?" I have just visited

the Anthropology Curriculum Study Project, where I have been impressed by the fact that they don't have many answers at all. The professionals are not even sure what the ancient stone tools were used for. I get the impression that you might be fishing for answers—preconceived answers—with some of these materials, and in that sense, your curriculum is closed rather than open.

Featherstone: I think not. In some specific matters, such as who ranked first, we certainly do know the answers. There is only one answer. But the significance of why this ranking system was established is something that I think children can answer in many different ways. To give you an example: The whole Sudbury story could be viewed, and some children have viewed it, as a triumph of individuals over a kind of medieval, corporate way of life. Individuals broke forth to own their own land, and to defy their "betters" for the first time. Other children have pointed out—another valid interpretation of the same facts—that it is in a way very sad, because the individualistic order that emerges doesn't have the same community feeling; it doesn't have the same respect for religion; it doesn't have a lot of other things. The children's interpretations of the emerging American character, which is what this unit is about, can be exceedingly different. The question of which of these character sketches really strikes you as being most American is the kind of thing we ask them to answer. It is, to say the least, subject to interpretation.

Lerner: I am concerned with the nature and the rationale of building inquiry processes. The idea of process is presented as being vital to the teaching of history; for example, getting the children to act like historians. I am not sure, now that the rationale has been spelled out, to what extent that is a good way of teaching history, or whether it is more desirable than knowing the history. The extent to which children are really supposed to make their own discoveries is often neglected in the discussion of rationale.

The E.S.I. data are screened in advance; all the diaries are relevant; all the documents are pertinent. At last year's sociology convention, it was seriously debated whether we should give children a lot of data and let them figure out which are relevant or we should pre-sort relevant data, and let them do what they can with what is pertinent. This is the kind of argument I would like to see more of, to get to the basic rationale. What is it we want the children to do and why?

Plessner: Personally, I feel that any time we give a child anything we have prescreened it. We have certain reasons for using this textbook or that piece of material. I think if it is the process that we are after, then we can prestructure material, make a judgment about it and say it is worthwhile for the children to look at it this way. We don't know the answer to all these questions. I don't know whether it is better to give other data or to give it in a different way. All I am saying is that any time we give a child anything, we have prejudged it.

Testing

Senn: What difference in test results have you had between this presentation and the conventional type?

Plessner: That is another one of our unanswered questions. We are trying to develop tests to determine just exactly what happens in the children's minds. We have gone to E.T.S. (Educational Testing Service) for their advice, and worked with them to develop testing instruments. We feel a little bit unhappy, and I think E.T.S. does too, with the kind of test that they have evolved. At the same time, we are talking to other people devising different measuring instruments based on classroom observations. It is certainly incumbent upon us to develop measurements.

Featherstone: One of the things we are doing illustrates how we think previous and present testing is inadequate. We are thinking of doing a test unit which lasts a week. It would be a study of immigrants, say nineteenth and twentieth century immigrants to this country, and would consist of variations on themes developed in the course. That is, the children would have to transfer to the nineteenth and twentieth centuries their theories about the differences between Europeans and Americans in the eighteenth century. We could do this in a community study lasting a week. The test itself would be a way of educating as well as evaluating.

Sigel: I don't understand E.S.I. and I don't understand those here who say that they don't know how to evaluate their curricula. We teach the children processes of induction, hypothesis testing and theorizing, and somehow we expect them to do what we ourselves are unable to do with what we give them. Since we are, by our own admission, so inept at evaluating, and since we are teaching children how to assess evidence, establish methodologies, and

so forth, I propose that we hire these children who have been through our courses as evaluators for the courses.

Rationale

Fenton: I am curious about the rationale of the E.S.I. curriculum. It begins with a statement that American history courses found in the eighth grade are poor. I certainly agree with that, and we want to teach better ones. E.S.I. proposes to do this by using the idea of "From Subject to Citizen" to bring about better political socialization. But the well-known studies of Hess and Easton¹ argue that political socialization of the child is well on its way to completion by the eighth grade, so that if we do want to get at political socialization, we had better do it pretty early in the elementary school. E.S.I. also makes the assumption that if one wants to work with political socialization the best way to do it is by studying content in the seventeenth and eighteenth centuries. I don't know what evidence anyone could give that this is the best way. The evidence I have run across seems to indicate that it is quite a poor way, and I feel E.S.I. is left with a rationale that just doesn't hold together. Finally, the course proposes to test political socialization by a week's project on immigrants in the nineteenth century. It seems to me that E.S.I. ought to develop a clear and concise rationale for what it is doing. I hasten to add that Carnegie Institute of Technology had better do this, too.

Taba: I want to comment on the methodology of getting at curriculum innovation. At this conference, we had methodologies that started with schemes of concepts and generalizations, worked out with packages of materials rather than pieces of materials. We have also had two presentations that are a kind of English method: muddle through and look again, and muddle through and look again. Both have merits. I suggest that at future meetings, we raise the question of what is the proper place of the inductive approach as compared with a structured approach. Where can the two eventually meet? I am not assuming any of us has an ideal scheme. We ought to examine thoroughly both approaches, and users of both approaches ought to figure out very carefully an appropriate way of evaluating their particular methods.



¹ Robert Hess and David Easton, "Role of the Elementary School in Political Socialization," *School Review*, Autumn 1962, pp. 257-265.

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Values and the Social Studies

CHAPTER 13

Much of the difficulty in discussions about the social studies curriculum is attributable to ambiguities in the language we use. Apparent disagreement seems real and we fail to come to grips with the issues because we have different referents for the same words or use different words to refer to the same thing.

Social Science and Social Studies

To begin, then, social studies should be defined. This involves distinguishing the social studies from the social sciences. The *social sciences* are the scholarly areas concerned with the study of man in his social environment. *Social studies* is that aspect of the curriculum which is ordinarily based on the social sciences and history as a source of content, and intended as *general education*.

Social science teaching involves communication of the findings of the scholarly study, and of its philosophy and methods of investigation. For social studies teaching, there is an intervening phase of determining a rationale for general education, an intervening phase which social science instruction does not face. Note that you might teach social science *or* social studies in secondary or elementary school. The social science course (I include history here, in agreement with Professor Feigl's definition¹) is taught, or should be taught, with regard for the strictures of the discipline; social studies courses should be taught with regard for the demands of general education. And, frequently, general education in social studies has been taken to mean citizenship education. In terms of the practical results of selecting content and teaching procedures, similar results may be obtained whether the concern is social

science or social studies instruction. But I want to make clear that my concern here is with values in the *social studies* curriculum.

Evaluations and Value Judgments

I also want to make a distinction between *making evaluations* or *evaluating* and making *value judgments*. Evaluating, or making evaluations, involves judging whether certain criteria are met. It is basically an empirical process. It includes, for example, the scientist's comparison of data against the standards of investigation; or, at a higher conceptual level, deciding whether a hypothesis is to be accepted or rejected at a given level of probability. Making value judgments is a matter of deciding what the criteria should be; that is, of deciding what is right, or what is important.

Some people, for example those in the pragmatic school of thought, act as if all value questions were of the first sort, that is, of the evaluating type, involving only testing against criteria. To these people, the value problem is one of testing the consequences of an act or policy to decide whether it is right or not. There remains, however, the problem of deciding what criteria the act or policy will be tested against. I maintain, as Professor Feigl also pointed out, that there is no empirical procedure for such decisions unless a value or values are assumed.

The Harvard Curriculum Project

Much of what I am going to talk about has arisen out of my association with Donald Oliver at Harvard.² The Harvard Curriculum Project has viewed the critical task of general education in social studies as citizenship education. Relying on assumptions and notions about democracy—whether in the “pure” form of the town meeting government that was so frustrating to me when I lived in New England, or in the form of a republic—the concern has been that the general education curriculum prepare the student to make reflective, rational, “critical” decisions about public issues.

What is involved in making reflective, rational decisions about public issues? We identified, in an arbitrary dividing of reality, three basic types of problems to be faced in a discussion in which a decision about a public issue is to be made. Each calls for a somewhat different intellectual strategy, although all are interrelated in the sense that solving one type usually necessitates handling the others.

One of the problems is *clarifying communication*. In the past, propaganda analysis has been one aspect of this, but the approach has been much too limited. Teaching students to clarify communication should involve not only alerting them to recognize breakdowns in communication, but also use of the findings of semantics and linguistics—for example, on the way that symbols shape our thoughts, on symbol-referent relationships, on changes in symbol meanings that take place over time as well as from one place to another in space, and on the value loadings of language and their effects on behavior.

The most appropriate strategy for handling the communication problem when it involves disagreement over the meaning of a word is simply to find some way of agreeing how the word is being or should be used. Too often in public schools we have taught that the solution to this particular problem is to find out what the *real* meaning of the word is. Of course, there is no real meaning to a word. The basis of language is consensus as to how a symbol relates to a concept about reality.

A second type of problem, which involves a different kind of strategy for solution, is *determining matters of fact*. Making evaluations falls in this category. In education, the emphasis in teaching students to handle factual as well as other types of problems has been on Dewey's five steps of "scientific" problem analysis. Certainly scientific methods are relevant as strategies for solving factual problems. Even with stated commitments to teaching thought processes, however, most of the social science projects have tended to focus on substantive concepts. Despite its absence from the usual history course, historiography is especially applicable to citizenship education because, in making decisions involving public issues, we usually have to deal with reports, very rarely having an opportunity to be a first-hand observer. For instance, we contemplate the Viet Nam situation using information that filters through to us from the government via the news media.

I include *avoiding logical errors* as a subcategory of the factual problem. Logic in dealing with public issues usually has to do with the way in which factual realities are construed, that is, what we think is out there around us. Here the methods of the historian and the scientist, especially as formalized by philosophers, are particularly relevant.

The third general type of problem, and the one of central importance to our discussions, is *making value judgments*. Gunnar

Myrdal, the Swedish economist and sociologist, noted how important this problem-type is in our society, as evidenced by the title of his classic work on the position of the Negro in the American community, *An American Dilemma*.³

One of Myrdal's main points was that our general values tend to conflict with our specific values. For example, a man may be committed to the idea of the dignity of man, but in a specific situation act as if to deny this general commitment by not allowing Negroes to eat with whites. A person might believe that all men have an equal right to earn a living, but deny Negroes or Jews or non-Mormons or members of some other group the opportunity to work in his business.

As well as conflict between general and specific values, there is also conflict between and among our general values, and this is the more important kind in the political-ethical discourse crucial to citizenship education. A classic conflict that is overworked is that between freedom and security. Expand people's freedom and the security of some is threatened; expand on security and freedom is restricted. Other examples of conflict between general values come readily from the current civil rights dispute. Recent civil rights legislation could be defended in terms of equal opportunity for Negroes. On the other hand, and I think we have failed to appreciate this, Southerners and others opposed to the legislation have not used Fascist values to support their position; they use values generally accepted in our society, such as property rights, the right to local control, and freedom of association. These are good American values! And there is *real* disagreement over which should prevail in specific situations.

In many instances, then, we cannot agree upon the value to be used as the criterion for judging a policy. This is true if both sides claim that theirs is a final value and there is not agreement on a third, higher value, or if each disputant claims that his value is an essential ingredient of human dignity—which many people agree is the highest value of all in our society—and his value cannot be denied without denying human dignity.

Values, Empiricism, and the Social Sciences

What is the role of social science in these value disputes? If one accepts my position that value conflict is a legitimate and important problem area in making decisions about public issues, and that teaching students to deal with value conflicts should be an

important aspect of the general education program, then it is necessary to ask whether a curriculum based on the social sciences can be sufficient for general education.

Certainly the social sciences can identify the values held by the society or by subgroups in the society. They may even help to explain why we hold our values. But what role can the social sciences play in resolving confrontations between values? Charles Beard, writing in response to this question, made a classic statement in his book, *The Nature of the Social Sciences*:

Now we come to the second question raised by tensions and changes in society: What choices should be made in contingencies? Here the social sciences, working as descriptive sciences with existing and becoming reality, face, unequivocally, ideas of value and choice—argumentative systems of social philosophy based upon conceptions of desirable changes in the social order. At this occurrence empiricism breaks down absolutely. It is impossible to discover by the fact-finding operation whether this or that change is desirable. Empiricism may disclose within limits, whether a proposed change is possible, or to what extent it is possible, and the realities that condition its eventuation, but, given the possibility or a degree of possibility, empiricism has no way of evaluating a value without positing value or setting up a frame of value.⁴

In other words, ultimately, you must have a criterion by which to judge policy, and there is no way empirically to establish this.

Professor Feigl, if I interpreted him correctly, is in agreement with Beard. Charles Stevens, John Hospers, E. C. Ewing, Bertrand Russell⁵ are others who have agreed with this basic conception of the limited role of science in the ethical decision-making process, even though they do not necessarily agree on the best way to make ethical judgments.

To reiterate, social science can contribute to the clarification of value conflicts by describing what the society's values are. Scientific method also is helpful in resolving value disagreements that rest on factual assumptions. For example, proving that his assumptions are false may lead a person to modify or abandon a value position. A person may also abandon a value, that is, make a different value judgment, if it can be proved that a policy based on that value will lead to consequences that are objectionable in terms of a second

value. Also, when a third, higher value is agreed upon by the protagonists, then the methods of the scientist (which cannot posit the third value) can be used to predict whether a policy decision based on one value or the other will better enhance this superordinate value. But if there is a fundamental political-ethical conflict, that is if the disputants cannot agree on which is the most important value, scientific method cannot resolve the disagreement.

The student should be helped to clarify his values, to be sure that he understands what his values are and how they are relevant to public policies, and to develop some strategies for weighing those values in making decisions about which public policy he would like to pursue or have the government pursue. If there is any one area in curriculum where creative work is needed, this is it. There are people working on ethical analysis, but very little of their effort has actually been applied to what we might call political-ethical analysis, the ethical analysis involved in broad public issues.

Teaching Strategies for Values

Imaginative strategies that go beyond the empirical methods of science are needed. In the Harvard Project, we used analogous cases, and tried to train students to use them, to clarify value positions. For instance, the teacher might describe a freedom of speech case to his students:

A man is up on a soap box giving a fiery harangue. A crowd begins to gather, and the police who are present are faced with a decision. It looks like there may be violence; what should they do? Should they disband the crowd or try to hold them back, or should they pull the fellow down from the soap box and haul him to jail?

This is a familiar type of American dilemma, and students come up with different solutions based on differing, and usually unexamined, commitments. Analogy⁶ can be used to clarify these positions. Analogous situations can be constructed along a continuum, at one end of which freedom of speech seems to be extremely important relative to property damage, and at the other end of which property rights are dominant. Considering such a spectrum of cases, the range of analogies, and the differing decisions that might be made can help a student determine what decision he wants to support in a specific situation.

In our teaching, we often presented cases from points along the continuum, as counter-cases to the student's position. For example,

if a student replied that in the “soapbox” case, cited above, the police should stop the speaker, the teacher might query: “What if a presidential candidate who was very unpopular in your community was scheduled to speak and it became clear that feelings were so strong that a serious disturbance would occur unless action is taken. Should the candidate be told that he could not speak?” The analogy between the two cases lies in the confrontation between the principles of free speech and peace and order. However, when the speaker is not a “rabble-rouser,” freedom of speech takes on greater salience and most students would insist on police protection. (Whether it could be provided would likely be questioned—a factual question upon which the value choice might hinge.) When two such cases elicit contradictory responses, the examination of relationships between the situations affords a way of getting students to see that the values do conflict, and how they conflict, and of helping them determine at which point the nature of the situation has changed sufficiently so that they are willing to shift from supporting one value to supporting one or more others being violated.

The emphasis upon important conflicting values will often cause students to shift positions. Note that this is a personal decision. The teacher obviously cannot tell the student where he should shift. To the teacher, freedom of speech may be the most important thing in the world, and he would rather have people killed than have it taken away. To the student, human life may be much more important, so that he would give away freedom of speech to insure that human life was not taken.

Our use of analogy has been based partly on what is known about what people do when they become aware of inconsistencies. Myrdal points out in the Appendix to *An American Dilemma*, and Festinger’s theory of cognitive dissonance⁷ is based on, our tendency to forget, to repress, to push out of our consciousness our inconsistencies. Analogous cases help to force the student to deal with the full array of values and the conflicts among them.

Using the Structure of Disciplines

What I have said to this point should provide some thoughts about the place of values in the social studies curriculum and the resultant role of social science concepts in that curriculum. To recapitulate, I have tried to deal with the topic by looking at the social studies as general education and, specifically, at the citizenship function of general education. Obviously, there are other

possible functions of citizenship education and I am not suggesting this as the only one. But in making decisions about public issues we get involved both in evaluating—matching things up against criteria—and in making value judgments—deciding what the criteria should be. The latter choices are central to public controversy and to helping students develop reflective strategies for making political-ethical decisions. Given this central position of value judgments, empiricism's lack of capacity to posit values suggests that, while the concept of the structure of a discipline may well be an appropriate basis for determining what should be taught in a *social science* course, it is not adequate as the basis for the *social studies* curriculum.

Courses in the social sciences based on an analysis of structure in the fields of study which are called disciplines may, however, be an appropriate part of the social studies curriculum. The social sciences do have much to contribute in terms of the intellectual methods and the data for describing public issues and the context within which decisions about them must be made. Formally, logically, the idea of presenting concepts in the context of the structure of a discipline is powerful, especially to social scientists who have commitments to the work to which they have dedicated a very large portion of their lives.

The major structural questions often asked of a social science discipline may also be appropriate in shaping a "structure" of citizenship education. But the answers are going to be different. For example, Schwab⁸ deals with three major kinds of questions in defining structure: What is the subject field of the discipline? What are the substantive concepts? What are the syntactical or methodological concepts? The same sort of questions can be asked about citizenship education. In the rationale which I have been discussing, the subject or field is thinking reflectively about policy decisions in our society. The substantive concepts are those which are useful in describing and understanding the issues in the context in which decisions about them must be made. Here the social sciences have obvious application. The syntactical or methodological concepts are those useful in arriving at rationally justified decisions. Here the social sciences are relevant, but other sources of concepts are not only relevant; they are critical.

But what of the motivational power of presenting social science concepts as part of a structure of the discipline? Let us leave aside for now the question of the reality of the structure of a discipline,

the outcome of man's arbitrary efforts to define and study a field, and his analysis of the results of that study. It is one thing to have faith that there is order in nature, including society as the natural setting in which man operates; it is another thing to presume that the dividing of reality into segments for study, the basis of a discipline, necessarily reflects that natural order. Leaving that aside, there is still an open empirical question as to whether the concepts of the social sciences can be taught most effectively as part of a total course based on structure, whether they are best taught in relationship to understanding societal problems, or whether a combination of the two methods is most effective.

It does seem possible that the scientist's beliefs about the motivational effects of studying concepts in a context of structure are too much a reflection of his own excitement at creating structure. It is known that students tend to learn better that which can be related to and used in their own framework for viewing and construing reality. As Professor Sigel has pointed out, the fact that students come to the classroom with their own conceptual and affective frameworks is too often ignored. Teaching is not a matter of simply painting something on a *tabula rasa*; it is a matter of interaction between what we want the students to learn and what they have brought to the classroom. We cannot, for example, impose strategies of thought that seem best for handling the three major types of problems involved in political-ethical discourse. The task is to help the student to develop intellectual strategies of maximal appropriateness, recognizing that the student's frame of reference will have an impact and that the strategies will undergo change as he attempts to use them in his own life.

Inculcation of Values

What of the affective, as opposed to the intellectual, side of values in the social studies curriculum? I am not suggesting that we should inculcate values; I am not suggesting that we should not, either. Although some value judgments are at least implicit in what I have been saying—for example, the commitment to a rational, reflective mode of persuasion—the instructional intent is to help students develop concepts useful in identifying and clarifying their values and the implications of their values. At the same time, my position assumes commitment to the basic norms that structure our debates on policy. These norms are acquired largely outside of the school, although the elementary school and to some extent the

secondary school can play an important role in sharpening and reinforcing commitments to norms. As social studies curriculum people, we should not blush to impress on students the importance of these societal values, perhaps stressing human dignity as the basic commitment—with other central values, such as freedom of speech, defining the characteristics of dignity.

In emphasizing the importance of particular values, however, we must help the student keep in mind the inevitability of conflict between the values. We may, for example, stress a representative, majority-type of decision-making process as a value derived as a natural extension of a commitment to a basically rational man. To this value we should juxtapose another value that is extremely important in our society, expressed by such people as Thoreau and currently under fire across the nation: the right to individual belief and to dissent.

Conclusion

There are a number of other matters that could be discussed, related to the approach to values I have described: materials and teaching strategies, their interactions with students who have different personality characteristics, the grade level at which this approach might be introduced, the kind of sequence that might be followed, and the kinds of evaluation problems that one gets into with such a curricular approach. However, these items are outside the scope of this conference. I would simply like to emphasize again that values and, in particular, value judgments must be a central concern of the social studies and this must take us beyond the social sciences as a source of concepts for the curriculum.



¹ *Supra*, p. 20.

² See, for example, Donald W. Oliver and James P. Shaver, *Teaching Public Issues in the High School* (Boston: Houghton Mifflin, 1966).

³ New York: Harper & Row, 1944.

⁴ Charles Beard, *The Nature of the Social Sciences in Relation to Objectives of Instruction* (New York: Scribner, 1934), pp. 171-172.

⁵ Charles L. Stevenson, *Ethics and Language* (New Haven: Yale University Press, 1944), pp. 113-114; John Hospers, *An Introduction to Philosophical Analysis* (New York: Prentice-Hall, 1953), p. 494; E. C. Ewing, "Subjectivism and Naturalism in Ethics," in *Readings in Ethical Theory*, edited by W. E. Sellers and John Hospers (New York: Appleton-Century-Crofts, 1952), p. 120; Bertrand Russell, "The Elements of Ethics," in Sellers and Hospers, *ibid.*, p. 8.

- For a more extensive treatment of the use of analogous cases to expose and clarify value conflicts, see Oliver and Shaver, *op. cit.*, Chapters 6 and 7.
- ⁷ Leon Festinger, *A Theory of Cognitive Dissonance* (New York: Harper & Row, 1957).
- ⁸ Joseph J. Schwab, "The Concept of the Structure of a Discipline," *Educational Record*, July, 1962, pp. 197-205. Also, Joseph J. Schwab, "Structure of the Disciplines: Meanings and Significances," in *The Structure of Knowledge and the Curriculum*, edited by G. W. Ford and Lawrence Pugno (Chicago: Rand McNally, 1964), pp. 6-30.

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Values in the Curriculum

CHAPTER 14

Introduction

I want to argue for two points, both of which seem to me vital to the whole question of dealing with values in the curriculum, and both of which are almost completely at odds with common views about this problem. The first point is that the vast majority of value disputes are capable of settlement by rational arguments. The common slogan that "one person's values are as good as another's" is usually false and is usually an indication of insufficient training in empirical investigation or logical analysis.

The second point is that the analysis and resolution of value disputes is one of the most difficult intellectual problems that we ever put in front of the child in the course of the entire curriculum. A tremendous job lies ahead of us in developing methods and materials to teach teachers and children how to deal with this complex matter.

The Place of Ultimate Values

In disputes about what is "right," what is "better," and what "ought" to be done, the discussion frequently ends with the disputants in disagreement about the issue, but in agreement that the argument cannot be carried further. A common conclusion is that "You can't dispute basic values." The common term "ultimate values" can be used to refer to these values that are unarguable, in the sense that no further facts or logic can be mustered to show whether they are sound or unsound.

It is possible that there is no such thing as an ultimate value. One of the best philosophers in the country once said that he had

never, in the course of any debate on any moral issue, found a disputant who could not be shown, at every point, to be appealing to yet further considerations of fact or logic. The stopping-point of value-disputes, then, is very often a point of disagreement about a complex matter of fact, such as the actual effects of pornography on grade schoolers, and not a dispute about ultimate values at all.

The question of whether ultimate values *exist* is not very important, however, if it is true, as I believe, that *the great majority* of value disputes can be settled by empirical investigation and logical analysis. The educational task is to push back the frontiers of analysis as far as possible, not to worry about whether there is a last frontier. There is an interesting analogy in the physical sciences. The status of determinism need not be settled before we agree that the right approach is to seek for causes of all phenomena with all our effort.

Education About Values versus Indoctrination in Values

It follows from what has been said that most training of children in the realm of value disputes should have the purpose of helping them to become more skillful in clarifying issues, in verifying facts on which they believe their value judgments rest, in analyzing the soundness of the logic by which one value is based on another, and in examining the logical consistency among their values. This enormous task will keep us all busy for a long time to come, without bringing us to any insoluble problems involving ultimate values. And one can only deny that this is the approach we should be taking by showing that ultimate values are encountered early rather than late in the process of tracing back the logical underpinning of everyday value disputes.

Let us take the hypothetical example of a sixth grade class discussing a particular issue about freedom of speech. Assume that, in the midst of an explosive social situation, the making of a scheduled political speech by a member of the opposition would involve a large risk of rioting and loss of life. Should the authorities prevent the speech?

A common approach, in the rare cases where this kind of material is discussed at all, is to earnestly ask the class what they think should be done. Should the sixth-graders' views on this subject be regarded as important, interesting, valid? No, no more than their views on the merits of Freudian psychology or the quantum theory.

Can the teacher tell the children what the right answer is? Probably not, since her views may have no better factual and analytical basis than those of the children.

One way to begin to analyze the practical problem mentioned, where the value of life has to be weighed against the value of free speech, is to imagine what it would be like to abandon one of these values. If, for example, we abandoned freedom of speech as a value, what new institutions or system of rules would be required or possible to ensure a well-informed populace? What would be the logical consequences, for other values in our system, of abandoning the right to speak when speaking threatens life, limb, or property? What facts would be needed to assess the consequences of the change? How would it be decided whether to ban the speech? What redress for wrong decisions would exist?

The educational process suggested here has nothing to do with indoctrination in its usual sense of an effort to instill particular values or viewpoints other than by rational proof. By a second definitions, indoctrination is taken to mean the installing of particular values *plus* a resistance to rational examination of those values; sound educational policy must explicitly condemn indoctrination in that sense.

A third and perverse definition of indoctrination is sometimes encountered, according to which *any* process that affects the values held by individuals is indoctrination. By the first definition, indoctrination is nonscientific, which does not necessarily make it a bad thing. By the second definition, indoctrination is anti-rational, and therefore a bad thing for those who value rationality, as educators must. By the third definition, indoctrination is neutral with regard to rationality and morality, which may or may not be flouted by such indoctrination. Unfortunately, the term is all too often used without analysis, as a pejorative term to discourage the application of scientific methods to the study of values, and it then becomes a tool for irrational and immoral ends. Such use is irrational because it denies the use of rational methods to problems for which they are appropriate. It is immoral because it stands in the way of moral progress.

Our goal should be the straightforward development of cognitive skills for handling value disputes—not persuasion or indoctrination in the usual sense. Moral reasoning and the moral behavior it indicates should be taught and taught about, if for no other reason than that it is immoral to keep students ignorant of the empirical and logical bases behind the morality which is behind the law and

the institutions which incorporate this country's virtues and permit its vices. But in addition to this intellectual payoff is the practical benefit to a society of possessing members who are skilled in making value judgments. Such a society becomes a moral community, offering important benefits to all of its members.

Values in the Curriculum

Values in the curriculum should not be a wholly separate subject, but should have the status of a pervasive substructure, like critical thinking and clear expression. Value analysis work should begin in kindergarten and continue, with problems of increasing complexity, through high school. It can begin at what may be called the level of practicality in value analysis—the evaluation of products. Then, it might go on to the area of personal problems where questions arise about behavior that is wise or foolish, sensible or not. Good and bad behavior can be discussed, meaning, at this “prudence level,” good or bad for you. The discussion can then progress to the area of social problems—morality in law and politics—and finally to the level of international problems, where we come to the root question of whether or not international conflict is a domain for morality, a domain where moral judgments other than prudential ones can be given sense or made to stick.

I think such a sequence suggests itself naturally, and presents many advantages. Even at the early level of the evaluation of consumer goods, there are rather sophisticated procedures and distinctions which will carry throughout the rest of the curriculum. But at that early stage, the basic moral problems do not yet need to be faced. As the student grows older and the subjects more complex, more practical ethical problems are introduced, in the course of teaching other things.

A Basis for a Moral System

As teachers and students push the logical analysis of values farther and farther, the question of ultimate values will arise more and more insistently and, eventually, perhaps even legitimately. If an ultimate value must be found, the best candidate for the position is “equality of rights.” This is a value to which our schools and our nation are already politically committed, and thus has the great potential advantage of being reinforced by the prevailing mores. It is not open to criticism on the ground that appeal to it in the

public schools violates the separation of church and state. Equally important, "equality of rights" is a value upon which a whole system of morality can be built, a complete rational system based on this single premise.

There is not time here to spell out the moral system that can be based on equality of rights, but one can say that it is a system very like the humanist tradition of this country, as well as much of the Christian and Buddhist traditions. Neither is there time to describe the full meaning of equality of rights, although it is essentially embodied in the provisions of our constitution and our laws on voting and due process. While I do not object to giving "equality of rights" the temporary status of an ultimate value, a strong argument can be made for supporting this value on rational grounds, by appeal to probability, game theory and welfare considerations. As indicated earlier, it is still an open question whether any values are needed that go beyond that which is supportable by rational appeal to logical analysis.

Techniques

There are two dimensions to teaching how to handle values: the cognitive and the affective. We have been discussing mainly the cognitive side of values. In cognitive training, the methodology is that of the logician and the lawyer. In the analysis of legal systems, such questions arise as: What would be the conflicts if everyone followed this rule? What exceptions can be justified for this rule? and, What cases are subsumed under this general principle? Still other questions, the answers to which require factual materials from the social sciences, are: What would be the consequences of breaking this rule? What alternative rules might serve the same function? What is the significance of a particular custom to those who support it?

But there needs to be moral motivation as well as moral insight, which brings us to the affective side. The basic motivational training for a moral system based on equality of rights is closely connected with the training needed for understanding the positions and motives of other people. It requires seeing yourself in the other person's shoes and fostering of empathy and sympathy. Role-playing is appropriate in a great variety of historical, political, and social situations. It encourages full use of materials available to support the role, and requires an active effort to understand the position of the person whose role is assumed; it is an excellent way

to promote sympathy, and hence to promote moral behavior under the axiom of equal rights. Other techniques that will help to put the student into another's position are the use of graphic audio-visual materials, field experience, interviews, and discussions.

Materials


With few exceptions, there should be no separate materials for value-training, just as there should be no separate subject matter. For the most part, materials should be multi-purpose. Some examples follow.

In elementary science, students could begin very early to evaluate the relative merits of instruments. They could, for example, construct their own balances, and discuss with each other the relative merits of criteria of sensitivity, capacity, cost, and ease of use.

Another example is the use of materials from American constitutional law. Constitutional law embodies much of the nation's moral code. It represents an attempt to create a just or moral society, and its legal aspects give good training in the study of moral analysis. Since constitutional law also reflects much of a nation's history, it provides for moral analysis an ideal entree to the school's history offerings.

Conclusion

We need an approach to values in the curriculum which is pedagogically more explicit than at present, but not necessarily handled explicitly in a separate part of the curriculum. We should train students to assess alternative arguments about values in a consistent and intelligent way, and to push the rational analysis of values as far back as they can. Seldom if ever should a discussion of values end with the conclusion that the view of the student—or of the teacher—is as good as anyone else's. A value judgment is as good as the reasons for it, and as weak as the reasons that support alternative views.



Round Table: Values, Morality and Rationality

CHAPTER 15

Understanding, versus Commitment to, Others' Wants

Taba: I would like to get a little more clarification on the affective and cognitive sides of valuing. Let's take the example of putting one's self in another person's shoes. The playing out is one thing. One plays out what he already has inside him and feels. But there is also the question of the *expansion* of empathy. Does an increase in skills of argumentation cause an expansion of sensitivity? The materials one uses for extending empathy have to be different from the materials used to develop cognitive skills. They have to bring new meanings or extend feelings in some way.

Scriven: I make your distinction between playing roles and increasing sensitivity very sharply. I want people to see that they have to do more than teach children the role-swapping technique. If they want children to behave morally, then they have to get them to sympathize with the other child whose role they adopt. They must feel the pains of the other child and weight them like their own pains. It is of very great importance to my account that we officially support the equal rights doctrine. Given an understanding of that doctrine, I can argue that if a child puts himself in another's shoes and understands what the other wants and what his point of view is, he will come to the moral conclusion, a conclusion that the secular morality of this society endorses. And so I think that we are entitled to put some pressure on him, as we do every day in every school in this country when we say, "How would you like it if Johnny took your pencil?" It is not as if we don't teach morality. We do it all the time. I am arguing that

we ought to be honest about it, and that we are perfectly right in doing it.

However, you are quite right that understanding and a commitment to act are two quite different things. The extension of one's analytical capacity to see the point of view of others is one very important part of moral analysis. The second part, the extension of one's motivational structure, means that one is moved by the other person's point of view. I agree that both are important, and that we ought to be prepared to develop both. Parents, of course, have much greater rights and obligations concerning moral training than do the school systems.

Shaver: In teaching empathy, the Harvard Project used a variety of materials, including what we called "empathy" materials. For example, the students in the suburban community where we taught didn't know much about slums. We found a very good movie, *The Quiet One*¹, which very graphically illustrates a Negro youngster's day in a slum. The purpose of the film was to emphasize what living conditions meant in the boy's life. Many students were shaken by the movie.

Defending One's Values

Shaver: There is another aspect that we have found extremely difficult to teach children: analysis of the discourse taking place. This analysis is extremely important for arriving at a rational decision. We asked our students to keep two questions in mind: (1) "What is my position, and how can I defend it?"; and (2) "What is going on in the discourse, and how can I analyze the intellectual process so that I know what is appropriate next?" One of the most crucial concepts to teach youngsters, for example, is the concept of relevance. They must be able to analyze the discourse and decide what is relevant at each point in the argument, if the argument is to be productive; that is, if their own position is to be clarified along with those of others.

We wanted the children to know that we were concerned about their opinions, because we wanted them to examine their own commitments and to be able to support them. Our students were amazed when they discovered that we were really interested in what they believed, and that if they could support their position, we would accept it rather than insisting that they adopt our position. It is the process by which you arrive at a decision that is crucial.

Different people using sound intellectual processes arrive at justifiable positions which are different.

We used two different teaching strategies to get the children to examine alternative positions. One was to have a student take a position and defend it personally in a one-to-one confrontation with the teacher; the other was a more diffuse dialogue, with a lower affective level. With the first style, the student was asked, "Do you think the police should have dragged the speaker off the podium?" "Why do you think that?" "What values support your position?" Using the second style, the teacher would ask questions such as, "What problems can you see with the action of the police?" "How do you think other people would react to this situation?" With this second style, no one student was forced to take a position and defend it. Issues were dealt with at what I call the societal, as opposed to the personal, level.

Our research on the use of the two methods showed the following: When we made an overall comparison of the two methods, there was no significant difference, as is so often the case in educational research. But when we categorized students on personality traits, we found that some types of student did better with the first style of teaching, and other types did better with the second style of teaching. These results are not only interesting in themselves; they also point to the possibility of much more fruitful educational research through greater use of designs that get at interaction effects.

Affective Impact of Value Questions

Sigel: An important problem here is that the Harvard Project was getting highly involved in the affective life of the child. Irrespective of the academician's rational, analytical approach, these values have high affective valence for the child. Conflict is produced which can only be "resolved" by acceptance of the conflict—which is a very difficult thing for children, or for any of us, to do. There can be conflict of the child's beliefs with society's view, with his parents' views, and also with what the child perceives as the teacher's beliefs, no matter how neutral or supportive the teacher tries to be.

Such differences in viewpoints become very significant because we are now much more in the affective than the cognitive area. Regardless of the skills employed to solve the value problems, the content is highly emotional.

There are many out-of-school factors. Unless we are sensitive to them, and especially to possible school-home conflicts, we are discussing values in an ivory tower. If a child in the South goes home and says, "I learned in school that the IQ's of Negroes are as high as whites," there may be real trouble for the child and for the teacher.

Shaver: You are right. We found that children are frequently punished rather than rewarded for thinking in ways that are original or independent. Exposure to our curriculum created some problems at home, and we found it useful to give our students advice about "using reflective thinking judiciously," which meant, "Be cautious about challenging your parent's positions." A youngster is doing something that is quite reasonable but very upsetting to his parents when he tells his father that he doesn't have evidence for his position, or that there is another value that he is not considering, or that he should define his terms more carefully.

Scientific Versus Ethical Questions

Senesh: I would like to direct a question to Professor Scriven to clarify my own thinking. Suppose that I ask my class a question, and he asks his class a question. My question is, "What caused the unemployment during the Great Depression: the low level of economic activity, or the laziness of workers?" My reason for asking the question is that I know ahead of time that I have failed the student if he tries to prove to me that lazy workers caused the unemployment. Now, he asks his class, "What is more important, liberty or prosperity?" I pose this problem because he has indicated that there is hardly any difference between the two questions.

Scriven: The big difference between the two questions is not that one is in economics and the other in ethics. It is that the economics question is rather specific, while the ethics question is quite abstract. Suppose the economics question were, "What causes unemployment?" The laziness and lack of demand are both plausible answers. The question, "What caused unemployment in the Great Depression?" is much more specific, and a specific answer is possible.

I am entitled to the same degree of specificity. I have an answer to the question, "Is liberty more important than property when somebody, by publishing an editorial which criticizes the government, finds that his newspaper is burned?" I think I have failed

my student if he says that burning a newspaper is such a serious crime against property that we ought to censor the editorial in order to prevent the crime.

My point is that we cannot give students "right" answers to questions that are extremely complicated, or very abstract, or poorly specified. Our duty as teachers is to show them how to find the arguments on both sides of such questions, what they have to do to find additional relevant evidence, and what are the various values that must be considered.

Ends and Means

English: We seem to be getting close to what has been a big headache for me in trying to develop a social science program and trying to help teachers teach it. I agree entirely with Professor Scriven that we have to introduce ethical discourse—rational criticism of values—into the whole school curriculum, including the social sciences. The real problem for a social science teacher is to show the youngster how, even when his values are clear, he may apply them effectively in society. What I am saying here is what Max Weber said long ago: the relation between the intent of a political action and its result is almost always paradoxical. What seems to be *prima facie* the just and correct action in a given situation may actually cause more injustice. One of the dangers in teaching youngsters to argue purely in terms of rational values is that they may fail to recognize this subtle but very real difficulty.

This is the old problem of means and ends. There are situations in which, if you use certain means, you won't get the ends that you were hoping for. This is something that the social scientist is up against all the time and should try to deal with in his classes.

Shaver: I disagree with your assessment of the danger. If I understand you correctly, you are talking about *another* very important element in the curriculum to be taught, in addition to rational analysis of values and policies. The question is, once you have decided on an appropriate policy, how do you ensure that it is implemented?

Scriven: I think that Mr. English is indicating a source of uneasiness about the tough line on values which I take, and that his question should be answered explicitly. It does not follow, from the conclusion that one knows how things ought ideally to be arranged, that one should set out singlemindedly to bring about

such an arrangement. It is extremely important that, as part of ethical and value analysis, we consider reasoning such as this: "If we had a revolution, the resulting state of affairs would be definitely better than the present state of affairs; but it isn't worth having a revolution to get the change, because the gain isn't as big as what we would lose during the revolution." I think the message illustrated here has got to be repeated many, many times. One must not think only in terms of ultimate goals, but also in terms of the cost of intermediate goals.

You must also take account of another point: "Don't strive for what is right if it is opposed by a large number of the people, even though they are wrong or probably wrong, unless the gain is greater than the cost of overriding what they want to do." This is a separate point. It isn't just that the cost of bringing about this state of affairs may be so high that the ultimate gain is negative. But it is also the case that with respect to somebody's values which are indefensible, you may have to make a big allowance, not as much as if they were actually defensible, but very much of that magnitude. For the "right to be wrong" is an important value. (It should be called the "right to self-determination"; there is, strictly speaking, no right to be wrong.)

Social Studies as a Vehicle for the Study of Values

McNee: I would like to hear more discussion on the whole question of the relation of the social sciences to the study of values. Let's grant that the study of social values, or values in general, must be a part of the curriculum. Let's grant also, as Professor Scriven has very well established, that there are advantages if the teaching of values is linked with the social sciences. What we haven't directed ourselves to at all is the opposite side of this coin, which is: "What are the pluses and minuses for the social sciences in having them taught in connection with values?" I don't think we can get anything free in this world. If we link the teaching of values with social sciences, perhaps we lose something by not linking it with, say, language arts.

We are bound too much by tradition. We all seem to be thinking that the social studies exist as an unchanging package in the schools, rather than thinking that there are certain things that we want to get across, and asking what are the various possible curricular arrangements that would yield the best results.

Shaver: The best way to arrange the social studies is an empirical question. But I don't think that the important question is what the social sciences tend to lose or gain. That is really irrelevant to general education. The important question is, what do the social sciences contribute, what can they contribute, to general education? We can't avoid the question of what we want to do with general education. We must ask ourselves, "Is it part of the general education program to train social scientists—to induct students into the social sciences?" We also have to ask if it is part of the general education program to induct students into carpentry, and into deep sea fishing. I do not think that general education owes anything to the social sciences.

McNee: You are willing to be the rider, but not the horse. You want to teach values, or teach about values, and you are willing to use the social studies if that suits your purposes. But you are not willing to have the social studies people use values to suit their convenience.

Shaver: No. I am saying that the social sciences are an important ingredient of a general education program aimed at teaching children to analyze public issues. The social sciences have a lot to contribute in the way of information about an issue and the context of the issue. Social science also has a lot to contribute in methodology—hypothesis-testing, the historian's concern with the validity of documents, and the like.

Whether the student learns to use these concepts or intellectual strategies and to apply them to public issues best in the context of a course based on the structure of geography or some other social science, or in a course that would deal with important public issues and bring in social science concepts as they seemed relevant, we don't really know. We did find out in the Harvard Project that over a two-year period when our students put in only about one-third of the usual time on a U.S. history course, their learning of U.S. history and political science did not suffer. As a matter of fact, when we looked at items testing knowledge that was taught as part of a historical survey and was also relevant to our problem units, such as racial segregation in the South and problems arising from the growth of labor unions, we found that our students learned more history than students in a regular history course. This finding indicates to me that there is reason to doubt

that basing courses on the individual social sciences is the best approach for general education.

Morrissett: Professor Scriven, you seemed to accept the idea that the social studies curriculum is a proper place for value judgments. Would you care to comment further?

Scriven: One has to distinguish two types of value judgments, non-moral and moral. Elementary science study is one of the places where it should be stressed that the empirical sciences are also involved in evaluational activities—the evaluation of instruments, descriptions, theories, hypotheses, predictions, accuracy, and so on. All of this is part of the activity of the scientist, whatever field he is in. So, evaluating goes through the whole structure of education, whether it is physical, biological, language arts, or whatever. But I want students to see that moral value analysis has little relevance until one gets to the place where more than one human being is involved. That is what morality is about. Moral judgments naturally come into social sciences more than into other subjects because the social sciences deal with relationships among people.

Morality and Rationality

Fiegl: I am still a little confused as to whether we are talking about the same thing when we talk about values in the social studies curriculum. So, I want to repeat for emphasis something Professor Shaver has said already very clearly. Namely, it is one thing to study evaluations—and clearly the social studies and social sciences are full of such studies—but it is another thing to inculcate values. I don't mean to indoctrinate, but rather to impart some value attitudes, to mold the evaluational attitudes of those to be educated. This can be done in a variety of ways. It can be done in a physics laboratory by showing that it is unfair to use an instrument that another person has just prepared for an important experiment. There is an ethical issue there. In any context, moral questions can come up.

I whole-heartedly agree with Professor Scriven that we should carry rationality to the limit, but we should first lay our motivations frankly on the table. We are both humanistically inclined. This is only a label, but you probably understand what I mean. We feel that in this day and age of science, the fundamental basis of value judgments, *moral* value judgments, should not come from the

supernatural, should not come from a theologically framed religion, but from somewhere in human nature. This is a very rough and inadequate formulation. But both of us believe that moral value judgments should be rational.

However, Professor Scriven and I are also very much interested in the analysis of meanings of terms, and he knows as well as I do that the term "*rational*" and the noun "*rationality*" cover a multitude, not of sins, but of virtues. To speak the language that we both understand and appreciate, such as the language of Ludwig Wittgenstein, there are family resemblances, not necessarily strict common denominators, among the various meanings of a given word, such as the word *rational*. I will list only a few of these meanings.

(1) We say that a person is thinking in a rational way if his performance is in accord with the norms of deductive logic: consistency and conclusiveness of reason is one virtue.

(2) A person could be quite consistent and conclusive in his deductive reasoning and be quite irrational with respect to inductive logic. In other words, he does not learn the lessons of experience; he does not make the proper generalizations, or inductions.

(3) We call a person irrational if he uses the wrong means toward the end that he has in view. If I take a pound of butter in order to pound a nail into the wall, you will say, "Feigl must be crazy." It is not a very good way to hammer a nail into a board.

(4) Professor Scriven also pointed out that we must consider the cost of the means, and not just the financial cost. There are all kinds of burdens that we impose upon ourselves in order to reach certain ends, and if someone does this in an inappropriate way—if he uses means that are much more costly, not in financial terms only—then we call that irrational. On the other hand, an effective use of means, a parsimonious choice of means, is another meaning of rationality.

(5) Finally there is ethical rationality. If one conceives it roughly along Kantian lines, it seems to be rational to allot equal rights to everybody; it has a certain flavor of rationality. I agree that there is a family resemblance, but no more than a family resemblance, between the previous concepts of rationality and the concept of moral rationality that includes the norms of fairness,

justice, and equality of opportunity for all. But it *is* a different thing.

My major question to Professor Scriven is: Is not the norm of equality itself a matter of commitment rather than something that we can justify empirically? If we do justify this norm empirically and say that it, too, can be regarded as a means to *another* end, namely, a happy and harmonious society, then we can immediately repeat the question, Is *this* end morally right?

Berlak: I would like to add another question, because I think Professor Scriven can handle them both at the same time. What is the role of empiricism in morality, and how is empiricism related to rationality?

Scriven: First let me discuss the argument of Professor Feigl that you must distinguish the study of people's values from indoctrination. He and I both agree with this distinction, but what I am talking about is something different. I am talking about training people to make evaluations correctly; and I am saying two things about such training. One, we do it all the time, and we know very well we can do it properly; yet, we conceal from ourselves the fact that we do it. We do it with respect to teaching how to improve performance on the track, how to give good answers to examination questions, and how to distinguish a good from a bad account of the causes of the American Revolution. We do it when we are talking about whether or not this microscope is a good microscope by comparison with that one.

The instances I have just mentioned are all cases where the fight about the criteria is not the big fight involved in Professor Shaver's illustrations. But that doesn't matter; it is still valuing, evaluating. It is still the activity of making value judgments in the straightforward sense that you come up saying that something is good, better, worse, bad, and so on. We should be explicit and honest about this. We also should push it as hard as we can and be willing to move it into the social sphere and talk about the superiority of a particular form of government in a particular time and place. We should be willing to say, for example, that trying to run a medieval system in America, in the situation described in the E.S.I. unit, was a mistake. It was not the best system for those people at that time, and we can show why it was not.

Feigl: But you have some norms up your sleeve.

Scriven: I have no norms *up my sleeve*. I have up my sleeve the fact that I have studied these people enough to see what in fact they wanted and needed. It is not a hidden norm of mine; it's a fact about them.

Professor Feigl's comment brings up a second point—his concern about the ultimate values to which he believes I am implicitly appealing. First of all, I think rationality is not a concept with multiple meanings at all, but a cluster concept with multiple strands. That is quite different. Each of the first four traits which Professor Feigl mentioned is a very important factor in determining somebody's rationality. No one of them is decisive; that is, a person might slip on one of the types of rationality, but if he holds up on all the others he will still be judged to be a pretty rational person. So, none of the particular types of rationality is a necessary condition, but the sum of them all is certainly a sufficient condition for being rational.

Moral rationality, Professor Feigl's fifth category, seems to me independent of the others until it is shown to be dependent on them. I do not take moral justice or fairness to be a criterion of rationality until a demonstration is given that it is rational in the non-moral sense, the basic sense, for people to be just or fair. That demonstration requires proof that the axiom of equality is in fact the rationally preferable axiom for the distribution of interpersonal consideration in society. That axiom must be made to stick.

I make the axiom of equality stick in a straightforward way. Imagine a group of people with different though somewhat overlapping concerns—ultimate values in Professor Feigl's sense, needs and wants in my sense. There are various ways in which these people individually may act with respect to the others. They may give the others no direct consideration at all, concerning themselves with others' welfare only insofar as it is instrumental to their own good. Or, their behavior might be anywhere on the spectrum up to complete altruism in which the slightest whim of another is a ground for them to kill themselves. Can we say anything about the empirical results of adoption of these various attitudes toward others? This is the key question in founding morality. I argue on analytic and empirical grounds that, in fact, the equality axiom gives the optimal solution. It is optimal in every situation in which our power to enforce our desires is not greater than the combined force of all others who might band together against us. This condition has held throughout the history of every society whose members have even the slightest education. That is the argument.

Two comments should be made about this argument. First, it does not beg any moral questions. I am not saying this is the best form of morality because of some previous moral commitment. I am saying that because one is hungry, and because one wants to socialize, because one wants shelter over his head, there is a practical problem in front of him. Out of that practical problem, we generate the system of allocation of consideration which is morality. There should be no moral presupposition for morality.

Second, the question arises of what we should do with the argument in the school system. I say that whether or not one agrees with my arguments for the superiority of that axiom, he is not allowed to teach in the school system if he does not accept them. Ours is the school system of a democracy which is committed to the equality axiom in just the sense that I have stated. This is the sense that is embodied in our constitutional law, and, not accidentally, it is also a basis for morality. Thus, I have supported the argument on both theoretical and practical grounds.

A final point, in response to Professor Berlak's question: it seems to me that the notion of rationality includes empiricism. When we say that somebody is rational in the ordinary sense, we include empiricism. In the same ordinary sense, I am saying that the support for morality is empirical, that the support comes from objective, observable facts. And it is the social sciences which give us the data for solving the empirical aspect of moral disputes. That is why social sciences are peculiarly relevant to moral judgments.

Rational Arguments for Ultimate Commitments

Feigl: I want to reply to Professor Scriven by saying that one man's whim is another man's profound moral insight. The majority is not necessarily right. If one looks at what little we know about the development of moral codes throughout the history of mankind, one finds some genuine innovations. I am disregarding the theological aspects, such as matters connected with after-life and relations to the supernatural, and thinking only of moral attitudes and behavior: love thy neighbor, and even thine enemy. The Romans, the great stoics, even Aristotle himself, had absolutely no taste for that. So, this was an innovation.

Can we give rational arguments for these ultimate commitments, such as love thy neighbor and the principle of equality? I maintain that the cultural anthropologists of the last century confused mores with morality. Proof that folkways are different in different

places on earth requires only a trip around the world. That is obvious and trivial. What is perhaps not quite so obvious is that there is a convergence in the moral ideals, in the norms, of mankind. Despite the horrible violations of these norms, as in recent history, these standards come more and more to the fore in humanity at large. Perhaps I am overly optimistic on this, but I do think that certain principles of morality emerge, as in our civil rights program and our growing objections to war.

There are moral commitments in back of these convictions about social issues. But I do not think that we can justify them as means to further ends. One comes to the end of the rope somewhere, in a logical reconstruction of any kind of dispute concerning what ought to be done.

Scriven: One comes to the end, but the end is not a secret ultimate value. It is needs and wants. It is the facts of life. It is the fact that one has to solve the problems of social living if he intends to continue to live, not because he is saying that life is good, but because he is saying that he wants to live.

Shaver: That is a value judgment.

Scriven: Of course it is a value judgment, but not a moral value judgment.

Shaver: Yes, it is an ultimate commitment.

Scriven: It is not a moral value judgment. We are talking about where the moral ultimate comes from. It is not a moral source. Of course, it is an ultimate commitment. That is what gives the driving force to search for the moral solution. There is no question about that. Reason, as Hume said, is the slave of the passions. If one doesn't have interests, one is not going to be concerned with logic. The fact that one has interests, that one wants to live, is a fact. It is not a value judgment. It is a fact.

Feigl: But it doesn't settle moral issues.

Scriven: The desire to live does not settle moral issues. It generates the problem from which we construct the system of laws and morality which does settle moral issues, and which creates the concept of morality. In precisely the same way, an interest in games creates the game of chess, for which the phrase *good move* is then defined.

Shaver: We wouldn't necessarily all conclude that life is good.

Scriven: Not in the least. The remark that life is good strikes me as vacuous. I don't think it is either good or bad; it just is. But killing people wantonly is bad.

Shaver: Why?

Scriven: Because that is something one can evaluate within the framework of rules and norms which can be defended rationally once given that people *want* to live. You do not have to start off with a conclusion that life is good or that eating is good. That we want to live is the power which drives the moral system which increases our chances of living.



¹ *The Quiet One*, by Janice Loeb, produced by William Levitt, 66 minutes, sound, black and white.

Herbert Feigl
Michael Scriven
Lawrence Senesh

Concluding Comments

CHAPTER 16

Herbert Feigl

In regard to the value problems that have been discussed, there seems to be agreement that the school as well as the home has some responsibility for moral education. Since this is so, the philosophical basis for the inculcation of fundamental norms should be made clear.

I still hold to my previous opinion, which differs from Professor Scriven's. There are ultimate values, which cannot be justified by appealing to logical consistency, deductive reasoning, or empirical research. When there is divergence in judgments, based on ultimate values, there are four possible procedures to settle the differences: (1) coercion—sometimes requiring violence, which I abhor; (2) persuasion; (3) compromise; and (4) higher synthesis.

We can illustrate these methods with an example of two fellows who want to go out for an evening. One wants to go to a burlesque show, the other to a James Bond movie. The issue is not important enough to suggest coercion. One may be able to persuade the other to his point of view. They may compromise by going to both shows in succession. Or they may decide on a higher synthesis, by going to the symphony! In international matters, the alternative to coercion may be found in a higher synthesis, in which national sovereignty is abandoned and a world state based on world law is created.

I am optimistic enough to believe that through the experience of living together on this planet, we are slowly approaching some sort of common denominator in our basic moral norms, such as: do not do harm to your neighbor; love thy neighbor; be kind, helpful, fair,

just; and try to achieve certain personal perfections. Of course every one of these terms is open to persuasive definition. My viewpoint is that of a scientific humanist, which seems to me to be a proper solution for our age of science.

Michael Scriven

A fallacy that seems to be commonplace in curriculum structuring is the imposition of logically sound categories on curricula without investigating the question of their pedagogical utility. The field of critical thinking gives one of many examples. There are logical distinctions of great importance between hypotheses and observations. But it is not worth structuring curriculum in terms of these logical distinctions unless they have, not just teachability, but value in teaching. They must contribute to increasing enlightenment.

There is no evidence that, because something is perfectly clear to a teacher or curriculum maker, it pays to make it clear to the student. I looked at a sociology curriculum recently and came to the following conclusions. It teaches a vocabulary, but the net intellectual gain from it is indistinguishable from zero. If one wants to talk to sociologists then it is splendid: talk to sociologists. If that is the value being aimed at, it has a value. But we are supposed to be talking about other kinds of values: insight, the capacity to explain, the capacity to predict, and the capacity to classify and describe more efficiently than we could before. If these are the criteria, vocabulary itself does not contribute toward meeting these criteria.

It is not that one can easily say what classifications give one intellectual insight. The history of psychoanalysis is the history of a fight about this kind of question: Is psychoanalysis a re-description of old phenomena or is it a genuinely new and explanatory theory?

No one ought to go very far with curriculum work without getting one of his worst enemies in as an evaluator. He must be given money to tear the curriculum to pieces. We must listen to somebody who says, "What you are doing is teaching them a new way of talking about the same old things, and at the end, they won't know a thing more, except a new way of talking about it."

There is another general point to be made about attempts to produce conceptual reforms of the curriculum. There is a tendency to go looking for concepts to hang everything on, the "fundamental concepts" of the discipline, and then to hang everything on them. Nothing is more boring than doctoring elementary material so that

it will hang on the same coat rack as Ph.D. theses. The kids are bored by it, I am bored by it, the teachers are bored by it. Of course, it looks neater. We have restructured experience in terms of 9½ basic concepts; but that is not really what we are after. We are trying to increase the extent to which children understand those aspects of their experience which they did not understand before. Understanding is not just describing.

There is no clear empirical evidence that giving highly organized structures of knowledge to the children is really going to be the best use of our time and theirs. It may be that it is much better to spend a very little time giving them hints about the overall organization, and to let the full picture come alive as a by-product to discussing in low-level terms many specific cases that they find interesting and challenging.

Another matter that has come up is the defense I gave in the Ford and Pugno book¹ for teaching geography and history early in the schools, which is quite the opposite of Professor Senesh's approach of using the other social sciences in the elementary grades. My reason for suggesting this sequence is that the theories of sociology, economics, anthropology and political science are so very weak, as compared with the validity of the data available to them, than it would be a fatal disservice to education not to communicate the data and it is this which comprises history and geography.

In discussion of cooperative work among the disciplines, in the Consortium, I have talked of a multi-disciplinary approach, rather than an interdisciplinary approach. The notion of an ultimate synthesis of the social sciences is a dangerous myth, and an educationally vacuous myth, at the moment. There could be an ideal setting in which we can synthesize social sciences and produce something pedagogically valuable. Right now that is not true, but each of the social sciences has an enormously important contribution to make. The children will understand this better if they see the social sciences as autonomous subjects. I agree with Professor Senesh in this respect. We should not try to blend the social sciences until we know much more than we do now.

Lawrence Senesh

One very important point that has not been brought out sufficiently should be emphasized, because it has such a far-reaching implication. It is that the child lives in a real world where he is

exposed to all kinds of experiences. The home environment is sometimes one of brutal social realities. Television brings the outside world into the home. Modern communications and the child's own experience bring poverty, violence, discrimination, traffic accidents, authority or lack of it, within the view of the child. Unfortunately we cannot tell life: "Please wait until the child is ready for these experiences." The child's mind is overwhelmed by social realities. It is our job to help children discover a design that underlies the chaos of events.

I do not agree with those who say that ideas and theories are more complex than experiences. When a child asks questions, he is seeking orderliness, a simplification of facts—which is what theory is.

Theory is the ordering device for life itself; and life is the curriculum, not economics or political science or sociology. But in order to understand life, the individual social sciences have to be used, for the sole reason that there is no unified social science theory yet. That is the reason I see no sense in teaching social studies, which consist of generalizations of such a high level that they are not useful in problem-solving situations.

We have discussed the relationship of knowledge to behavior, attitudes and skills. I became more convinced than ever that it is through the use of the analytical tools of knowledge that we get the desired changes in behavior, attitudes, and skills.

Professor Sigel has described, quite correctly, the many obstacles in the way of communication between the theoretician and the child. I hope that his speech was not meant to discourage us, but rather intended to irritate and stimulate us to more innovation. The difficulties must be overcome, and we must learn how to establish a meaningful relationship between the child's experience and the body of theoretical knowledge.

The material covered in this book has probably opened up more questions than it has answered, and I will mention those that seem most important.

(1) A question raised by Professor Taba a number of times, as well as by others, is: "How can this dialogue among specialists be continued so that some useful synthesis of their knowledge, interests, and efforts will emerge?"

(2) How can we best encourage progress in evaluation methods, so that we know whether the innovations into which we put so much effort are right?

(3) How do we know whether the "market" is ready for new curriculum ideas? If the market is not ready, should we put the new ideas in mothballs until it is ready? Or should we do as most business firms would do: advertise and create a need for the new product?

(4) How can we establish good working relationships between the people who are primarily responsible for teacher training and those who work on curriculum innovation? This question has come up again and again; there have been many sparks, indicating continuing conflict. I don't know how serious the conflict is, but we should think very hard about how to bring about cooperation between these groups.



¹ G. W. Ford and Lawrence Pugno, *The Structure of Knowledge and the Curriculum* (Chicago: Rand McNally & Company, 1964), 87-105.

APPENDIX

A Note on the Social Science Education Consortium

The Social Science Education Consortium is a non-profit corporation, whose members represent all of the social sciences and all levels of education. Its one over-all objective is to encourage and support creative, cooperative work among social scientists and educators in the development and use of elementary and secondary social studies materials in which the content and methods of the social sciences receive the major emphasis.

In support of its major objective, the Consortium is concerned with helping teachers and curriculum workers creatively to consider and adapt the available new curriculum resources to their own interests and learning situations, improving working relationships among functionally and geographically scattered social science education projects, and improving working relationships between curriculum projects and school systems.

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